The influence of a Teaching School Alliance on classroom staff's professional development

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Abstract

Teaching Schools are an innovation in system-level leadership for educational improvement. Launched in 2010, they are intended to form partnerships or 'alliances' with other schools and providers to share learning, excellent practice and innovative ideas, principally in teacher education and development.

But there has been, to date, no detailed, critical, empirical research into the influence of Teaching Schools on teachers' attitudes and practice. Specifically, I raise the problem of whether this voluntary, multi-school collaborative grouping can reach the classroom staff who, policy-makers, practitioners and scholars agree, are the people who really matter in improving outcomes for pupils.

This thesis uses a change management perspective to investigate the influence of a large Teaching School Alliance on the continuing professional development (CPD) of serving classroom staff in its member schools. I report on the findings from a longitudinal, collective case study of eight sample schools, which employed a multi-strand, sequential, mixed-methods research design over three years.

This study reveals that, while a large majority of respondents say that they support change in principle, there is a fundamental gap between aspiration and practice which presents significant challenges for a Teaching School Alliance. The decision of classroom staff whether to adopt or not to adopt the innovation of collaborative CPD is shown to depend on their attitudes to their own professional development; and on their attitudes to change as it occurs in their workplaces; and on their attitudes to collaboration at system level.

My research develops a new understanding of the complex 'change ecology' that classroom staff experience when faced with an innovation to their practice. I provide a robust analysis of why collaborative development work might be confined to relatively few early adopters. The key insights of my work will be useful to practitioners who are currently leading school systems; to policy-makers who are planning future collaborative action for improvement, both in England and around the world; and to researchers with a focus on change management in educational settings.

Preface

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text.

It is not substantially the same as any that I have submitted, or is being concurrently submitted, for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or is being concurrently submitted, for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.

It does not exceed the prescribed word limit for the relevant Degree Committee.

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List of abbreviations

CPD	continuing professional development
DfE	Department for Education
EdD	Doctor of Education
GCSE	General Certificate of Secondary Education
HLTA	higher-level teaching assistant
ICT	information & communications technology
ITT	initial teacher training
JPD	joint practice development
LEA	Local Education Authority
LSA	learning support assistant
MAT	multi-academy trust
NCSL	National College for School Leadership
NCTL	National College for Teaching and Leadership
NLC	networked learning community
NQT	newly-qualified teacher
OECD	Organisation for Economic Cooperation and Development
OMG	operational management group
PLC	professional learning community
QTS	qualified teacher status
SCITT	school-centred initial teacher training consortium
SISS	self-improving school system
TA	teaching assistant
TALIS	Teaching and Learning International Survey

Chapter One

Introduction

1.1   Definition of the problem

Teaching schools are a new feature in the complex landscape of education in England. The model is essentially one of self-improvement through collaboration between schools in six key areas of activity. The system structure foresees a multiplicity of alliances between schools, each alliance led by one or two teaching schools designated 'Outstanding' by Ofsted criteria and having a track record of collaborative work. Teaching schools have developed rapidly since their introduction in 2010, with the aim of having 500 designated by 2015 (NCSL, 2011a, 2011b). But it is not yet clear what the effect of teaching schools will be, and there has been a marked lack of evidence on the impact of between-schools collaboration (House of Commons Education Committee, 2013). Few independent, empirical research papers on teaching schools have been published to date. Indeed, in Chris Husbands' words, it is not clear "what is the problem to which teaching schools are the answer" (Husbands, 2015, p.31).

One problem which this model of school-to-school support might be intended to help solve is the thinning out of locally-responsive frameworks for education under successive national administrations. Since the Labour government of 1997, and in a process continued and intensified under the Coalition government from 2010, the English education system has become more centralised and at the same time more fragmented (Glatter, 2012). The 'middle layer' of local education authorities (LEAs) was charged by Labour via the Schools Standards and Framework Act 1998 with preparing educational development plans and determining performance targets for schools (Gilbert, 2012), but this level of the education system has shrivelled since 2010 due to policy-driven reductions in funding and limits on its powers resulting from a redirection of attention to both the national and local levels. The targeted support in a range of areas which individual schools could once expect from their local authority has all but disappeared (Keddie, 2014).

The centralised direction of priorities and practice in schools has markedly increased over the last two decades via a 'high-autonomy-high-accountability' system (Greany, 2018) implemented through a range of instruments including National Strategies (since abandoned) which directed both content and style of teaching; via Ofsted inspections, failure in which may lead to a school being closed or compulsorily converted to academy status; via the

introduction of a range of formal, published measures of performance such as '5 A to C at GCSE', a further variant including Maths and English, the 'English Baccalaureate' and most recently 'Progress 8' and 'Attainment 8'; and via frequent revisions, both radical and superficial, to the statutory school curriculum and assessment system at all key stages.

But running parallel to these centralising tendencies, the English school system has moved remarkably quickly since 2010 from a largely comprehensive, 'one size fits all' model to a far more varied structural landscape which includes **academies** (both those compulsorily converted and sponsored by another institution or a commercial company, and those voluntarily converting) which are independent of local authority control and which may be free-standing or belong to federations, chains or multi-academy trusts; **free schools** which may be established on demand by groups of parents and teachers, faith groups or other interested parties and which are centrally funded; and the remaining **maintained**, **foundation** and **voluntary aided schools** which have not changed their status. Nationally prescriptive policies such as the overarching Key Stage 3 strategy have been abandoned. Michael Gove, the Secretary of State for Education from 2010 to 2014, repeatedly emphasised his intention to decentralise, "reducing central and local government prescription for all schools to give heads and teachers the space to focus on what really matters" (Gove, 2012). And yet "what really matters" is nonetheless determined by central government: the desire avowed in the Coalition government's early policy statement *The Importance of Teaching* (HM Government, 2010) is to make the English education system one of the fastest improving in the world and thus able to compete with the highest-performing jurisdictions as measured by the triennial PISA tests conducted by the Organisation for Economic Co-operation and Development (OECD). The then Prime Minister's foreword to *The Importance of Teaching* states unequivocally, "*what really matters* is how we're doing compared with our international competitors. That is what will define our economic growth and our country's future. The truth is, at the moment we are standing still while others race past" (HM Government, 2010, p.3; emphasis added).

The solution to this policy demand for rapid improvement in a more autonomous educational environment was unveiled in *The Importance of Teaching*: the teaching school model aims to place responsibility for improvement in each school and across the education system into the hands of school leaders and teachers. Building on pioneering work on system leadership by Fullan (2005, 2004) and by Hill (2008, 2004), the rationale for this approach has been extensively articulated by David H. Hargreaves in a series of opinion pieces for the National College (the government agency charged with improving teacher and school quality). His central tenet is that "School improvement depends on improved leadership, but the necessary   scale, speed and sustainability of leadership development cannot be achieved by centralised action alone" (Hargreaves, 2010, p.4).

The underlying concept of teaching schools is that schools are better able to lead the work of other schools than are agencies outside schools: "they are a vehicle by which schools can lead the education system" (Husbands, 2015, p.32) towards the ultimate aim of a 'self-improving school system,' a complex model proposed by Hargreaves (2011) of local networks for practice transfer which are accountable according to national standards. These claims will be examined in more detail in Chapter Two of this thesis.

While structural changes consequent to policy shifts are a familiar aspect of the English educational landscape, the teaching schools initiative reveals a deeper challenge for educators in all schooling systems and at all levels – how do you make innovations stick? Husbands (in Matthews & Berwick, 2013, p.3) identifies the lack of "a framework for implementing and embedding successful practice" as a major source of disappointment with the plethora of school improvement innovations launched in recent years. Indeed, the failure to disseminate widely and sustainably the effective practice that all teachers know exists inside individual schools may be the single greatest barrier to the system-wide improvement pursued both by government policy and by educators and education scholars:

> Education has never had a problem with *innovation*. But education has always had a problem with dissemination – or, to use a more modish phrase, with knowledge mobilisation and knowledge management, with mainstreaming and scaling innovation, and with securing the widespread adoption of effective practices. (Husbands, 2015, p.33; emphasis in the original)

So are teaching schools the answer to *this* problem? Will local networks founded on personal contacts and responsive to local contexts succeed in transferring good practice where national and regional programmes largely have not? Crucially for the spreading and embedding of effective teaching, which was the chief goal of the Coalition government's education policy as declared in *The Importance of Teaching*, can the ordinary classroom teacher and teaching assistant be reached by what might appear to them to be just another education innovation?

1.2 Rationale for studying the problem

Introduced in England in 2010 with the first cohort becoming operational in 2011, teaching schools represent a new topic of enquiry in the field of school improvement, both nationally and internationally. Although founded in some cases on pre-existing partnerships of various types and degrees of closeness, teaching school alliances are a genuine innovation because of their formal designation by central authority, their national scope, and their overt focus on improvement at system level rather than at the levels of the individual school or the individual teacher. The very novelty of the phenomenon demands that critical, scholarly attention be paid to it.

At this early stage of the initiative's development, however, few empirical studies of it have been completed as of January 2018. Gu, Rea, Hill, Smethem & Dunford (2014) produced an interim report as part of a two-year study based at the University of Nottingham to evaluate the effectiveness and impact of teaching schools, and the quality of external and internal support required to enhance these, through initial visits to 18 case study alliances in the summer of 2013. Primary attention was paid to making a baseline assessment of how alliances have established themselves, and to analysing emerging leadership and governance issues. The project is relatively limited in its scope: for example, it cannot present evidence of the impact of alliance activities on teachers' professional learning (Gu et al., 2014). The second and final report on this study was delivered in 2015 (Gu et al., 2015), but its two-year duration only just qualifies the project as a longitudinal study. Also, although carried out by independent academics whose views do not necessarily reflect those of the Department for Education, this study was commissioned and funded by the National College, the government body responsible for designating teaching schools. An independent study by Keddie (2014) is thin in comparison: it looks at one teaching school alliance in London and interviews a small number of leadership staff (in six out of the twenty member schools) about their views of the opportunities and limitations that the alliance offers. A further tranche of reports, drawing on data collected for the National College's 'R&D network national themes project 2012-14', offers conclusions on evidence-based pedagogy in teaching school alliances (Nelson, Spence-Thomas & Taylor, 2015; Maxwell & Greany, 2015; Rea, Sandals & Parish, 2015; Stoll, 2015). Other reports specifically on teaching schools thus far published have been produced directly by the National College (NCSL, 2012a, 2012b, 2013; NCTL, 2014), and are uncritical surveys of activity or discussions of principles rather than independent, scholarly studies.

It could thus be argued that there has been, to date, a distinct lack of critical, rigorous, extended empirical research into teaching schools that is fully independent of the authorities

responsible for the implementation of the teaching school initiative. I aimed to help fill that gap by undertaking a longitudinal, in-depth case study of a teaching school alliance.

My primary focus was not on the alliance's structure or its leadership and management, but on its effectiveness in reaching the classroom staff who, both policy-makers and scholars agree, are the people who really matter in improving outcomes for pupils. The then Prime Minister stated in *The Importance of Teaching*, "The first, and most important, lesson is that no education system can be better than the quality of its teachers" (HM Government, 2010, p.4). In the extensive literature on school improvement, a focus on teaching and learning in classrooms is frequently identified as a crucial factor in raising pupil and school performance (Husbands & Pearce, 2012; Timperley, 2008, 2011; Bishop, 2011; Day, 2011; Leithwood, Harris & Strauss, 2010). However, the most recent TALIS survey (OECD, 2014) suggests that classroom teachers in England with three or more years' experience report having less than half the professional development time enjoyed on average by their peers in high-performing jurisdictions, and report less impact of training on their teaching practice (Micklewright et al*., 2014). It is thus apparent that securing effective professional development for serving teachers is a crucial factor in achieving the rapid improvement in performance across the system that government policy currently demands.

From a historical perspective, the outlook for the teaching schools initiative in this regard is not encouraging. Over several decades, commentators have lamented successive failures in the implementation of reforms to professional development (Joyce & Showers, 1984; Huberman in Fullan, 1992; Fullan, 2001a; Husbands, 2015). The central and enduring problem of school improvement is the spreading and embedding among teachers of innovations in professional practice that will improve pupils' outcomes. What reasons do we have to think that the teaching school model will succeed where other reforming initiatives seeking to achieve the same end have failed? What is different about this model that will allow it to avoid the most common outcome of attempts at educational reform, specifically at the level of the classroom teaching staff who have greatest impact on pupils' performance?

1.3   Research purpose

Because the professional development of teachers is key to their effectiveness, and because teacher effectiveness is key to improving pupils' outcomes, the main focus of my research was on the change management aspects of the Continuing Professional Development (CPD) strand of teaching school alliance activity.

The other five of the 'Big 6' strands which originally constituted a teaching school's official brief were investigated only as far as they influenced CPD. For example, the Research &

Development (R&D) strand could contribute to the content and scope of CPD activity through review of the academic literature on school improvement and professional development, or through support for teacher inquiry activities undertaken for professional development purposes. Activities delivered by the Leadership Development and Succession Planning (LSP) strand, such as training courses designed to prepare participants for promotion, could also fall under the umbrella of CPD.

However, the school-level activity of the School to School Support (S2S) strand, which is largely undertaken by people designated and brokered by the Specialist Leaders of Education (SLE) strand, was not considered because my focus was at the level of the individual's professional development. Likewise, the well-established and fully-developed range of Initial Teacher Training (ITT) activities lay outside the scope of my project because my focus was on the further development of already-qualified classroom staff, not on the education and induction of new entrants.

My aim was to investigate from a change management perspective what a teaching school alliance might offer in terms of professional development to serving teachers and teaching assistants in member schools, and to develop understanding of the factors associated with the diffusion of this innovation.

1.4   Research questions

The over-arching research question for my study was:

> *What is the influence of the teaching school alliance innovation on the professional development of serving classroom staff in member schools?*

This question led to the following sub-questions:

> *(1)   How do professional development activities spread or not spread among classroom staff in Alliance member schools?*

> *(2)   What are the facilitators and/or barriers to the spreading of effective practice among classroom staff in Alliance member schools?*

> *(3)   How is the Alliance perceived by classroom staff in its member schools?*

With regard to **sub-question 1**, it is apparent from my review of the literature on change in educational settings (which I present in Chapter Two) that the spreading and embedding of effective practice among classroom staff is of major concern to policy-makers, practitioners and scholars alike. This question focused on the process by which knowledge is transferred

over time through the bounded social system formed by my subject Alliance's management structure and member schools, a topic of enquiry which required a longitudinal research design. Data was collected by surveying classroom staff in a sample of Alliance schools at annual intervals over the first three years of the Alliance's operations, and was analysed using the well-established diffusion of innovations model (presented in Chapter Two) to develop understanding of how knowledge spread or did not spread through this system.

Sub-question 2 sought to identify factors which could promote or inhibit the operationalisation of the teaching school model's aims. Data was collected regarding factors in the success or failure of several different professional development activities offered to classroom staff at different times of the Alliance's life-span. Analysis of this range of examples focused on understanding why the practical implementation of the CPD strand of teaching school alliance activity might succeed or fail.

With regard to **sub-question 3**, my review of the history of partnerships between schools in England suggested that collaborative working has tended to be widespread but relatively shallow, and that improvements to teaching practice as a consequence of school-to-school collaboration are not uniformly apparent. The attention of classroom staff largely and understandably remains focused on their own pupils in their own school, subject department or team. This question sought to uncover staff perceptions of the value of a collaborative, multi-school alliance to their professional lives. In a second phase of investigation, qualitative data was collected by interviewing respondents in sample schools and asking them to reflect on issues which first-phase survey data revealed as being significant in the Alliance's activities. Analysis focused on understanding classroom staff's attitudes which might facilitate or impede the spreading of effective practice.

Because teaching schools are a new phenomenon in the English educational landscape and very little empirical work has yet been done on them, my stance as a researcher needed to be constructivist in the sense that I did not know what would emerge as I investigated the topic. At the planning stage of my project, I expected to find that the rates of diffusion of various professional development activities were uneven across the Alliance and over time (as indeed innovation diffusion theory predicts), but I did not know how or why that was likely to happen. My research questions were designed to help develop that knowledge.

This study produced a rich and complex dataset on the influence of a teaching school alliance on classroom staff's professional lives. I applied both statistical and qualitative methods of analysis to the data in order to develop a mixed-methods, three-year case study of a sample of member schools of my subject Alliance. I identified key factors which affected the spreading of knowledge among classroom staff through the structures and activities of the teaching school alliance.

1.5   Significance of the study

The teaching schools programme represents a major shift in the focus of school improvement policy, locating responsibility with schools themselves. It also expands the scale of the structures proposed compared to earlier experiments with professional development schools, school-to-school support and system-level improvement, both in the UK and elsewhere (examples of which are examined in more detail in Chapter Two). The eyes of the world are on England in this regard: policy-makers, practitioners and scholars both at home and abroad will want to know whether and how the teaching school model can operationalise what theoretical work has suggested are the key dimensions of collaboration between schools for improvement at system level.

In the **policy dimension**, it is important to ministers and civil servants to know whether a government initiative is achieving what it is claimed to be able to achieve: there are possibly substantial political and financial costs of failure. The evaluation of the teaching schools policy's effectiveness is an on-going process during and beyond the expected lifetime of the programme (the initial designation period of each teaching school cohort is four years, the first cohort being designated in 2011 and the fourth in 2014; as of February 2017, over 600 teaching schools have been designated in ten cohorts). My research contributes significantly to that process by following in close detail the development of a teaching school alliance from its designation over an extended period of three years, a longitudinal approach which is unusual for a doctoral project and which has enabled me to identify factors in the emerging success or failure of the initiative over time, not just in a mid-stream snapshot or an end-of-programme *post mortem* inquest. My full research design is presented in more detail in Chapter Three of this thesis.

In the **practice dimension**, school leaders and classroom staff need to know how to use policy initiatives for the benefit of their particular school and pupils. While theoretical principles can give a framework for effective action, the devil is always in the detail of specific contexts of place, time and people. In being a case study, my project was able to identify key factors in the specific context of a new teaching school alliance which has twenty-six members of different types and sizes. While generalisability in a positivistic sense may be limited, as in all case studies, there are likely to be common elements in the experiences of the schools in this Alliance which will be echoed in the experience of those in other teaching school alliances. Good ideas which can be adapted and pitfalls which should be avoided represent valuable, operational knowledge which can be transferred between practitioners via the medium of my study.

In the **academic dimension**, understanding the reasons for the persistent failure of educational reforms to embed and endure is a major aim of scholarly enquiry (Fullan, 2001a,

1992; Harris, 2009; Kirkland & Sutch, 2009). My research sought to identify factors which could help to explain why the teaching school model succeeds or fails. I can thus contribute to knowledge of how educational reforms can be operationalised, building on the very substantial body of research on school improvement models. Borman et al. (2000) identified four classic models based on their case study investigations of US schools:

> (1) **grassroots, site-based reform** - responsive to context, 'owned' by the school staff, but local and rarely replicable (Leithwood & Menzies, 1998);

> (2) **locally-mandated reconstitution of a school** - sacking and rehiring the school staff, reopening the school (Hardy, 1999), comparable to the academisation programme in England (Academies Commission, 2013);

> (3) **national-level, whole school reform programmes** – uniform   approaches are adopted across a jurisdiction's schools (Herman et al., 1998),   such as the National Strategies adopted in England from 1997 (DfE, 2011);

> (4) **partnership with a local, external partner** – charitable and commercial bodies offer programmes, such as the Education Development Trust's, or work in partnership with schools (Ritchie & Turner, 2012).

A recent review of London schools by Baars et al. (2014) suggests that elements of each of these classic models have played a part in the significantly greater rates of school improvement observed in London compared to other parts of England. Will the teaching school model help to spread the levels of improvement enjoyed in London to other parts of the country, and what might be the reasons for the success or failure of the model in this regard?

An additional benefit of my research design is that it was longitudinal in approach: I was watching a moving target and could trace the effects of changes in circumstances as they happened. Indeed, as a researcher who was also a professional working in the Alliance I was studying, I was in a unique position both in terms of access and of influence: what I discovered as an 'insider researcher' could be fed back into the work of the Alliance with the aim of increasing its effectiveness, and I was located in a strong position to observe those processes at first hand. The overall Alliance leader agreed with this conceptualisation of my position, and offered to pay my course fees from Alliance funds because he saw my research as a valuable element of the Alliance's self-assessment.

I next discuss the ethical challenges of being a researching professional and of studying the organisation of which I was a member.

1.6   Ethical dilemmas in being a researching professional

This section considers my 'positioning' as a researching professional who was funded by the organisation to which I belonged and which I researched. Griffiths (1998, p.133) suggests that all researchers need to engage in reflexive examination of their own socio-political positions and interests because "bias comes not from having ethical and political positions – that is inevitable – but from not acknowledging them." Reflexive self-examination has helped me to understand that my struggle with my own positioning was due in part to the multiple identities in tension with each other that I came to occupy. Drawing on the methodological and empirical literatures, and on my experiences as both a professional and a doctoral student, I developed three critical agendas through which to consider reflexively my practice and positioning. My agendas addressed: (1) my positioning as simultaneous 'insider' and 'outsider'; (2) the kinds of knowledge that I could produce; and (3) ethical challenges that I faced in being funded.

1.6.1   Reflexivity

The literature of doctoral practice predominantly offers reflexivity as a fundamental element in developing oneself as a researcher. Kamler and Thomson (2014, p.75) define "a reflexive scholar [as] one who applies to their own work the same critical stance, the same interrogative questions, and the same refusal to take things for granted as they do with their research data". Here I apply the idea of the 'reflexive scholar' to practitioners who research their own organisations. In this context, being a reflexive scholar means that professional doctoral researchers need to recognise and interrogate their fluid positioning as they move between the communities of the academy and the workplace (Drake with Heath, 2011; Mercer, 2007). I suggest that a key reflexive step is to analyse critically one's own subjective points of view (that is, experiences of and insights into the subject of study that are personal to the researcher, and which may be tacit rather than explicit), so as to identify and acknowledge the perhaps unresolvable tensions between research and professional priorities. It follows that a key product of these tensions is the 'situatedness' of ethics for professionals who research their own workplaces. The fair and faithful representation of the research subject, which is also the researcher's own professional community, must inevitably be influenced by the various positions that the researcher occupies. Thus, given that the professional doctoral researcher, as with the ethnographer or anthropologist, "in part creates the facts that he or she then records" (Gobo, 2008, p.73), reflexive consideration of how and why the resulting picture is being produced by the researcher is a vital part of the representation process. By means of the following agendas, I developed some transformative critical practices which helped me to interrogate my own positioning, thereby

"think[ing] and act[ing] critically about the principles and practice of research" (Taylor, 2007, p.160).

1.6.2 Agenda One: positioning myself as a researching professional

My first agenda dealt with three items: (1) my membership identity; (2) the difficulty of maintaining a 'critical distance' when researching my own workplace; and (3) dealing with the intimate knowledge that was accessible to me as an insider researcher.

I was an embodiment of my first agenda: a full-time practitioner (a school teacher) and also a part-time doctoral student researching the influence of a collaborative group of schools on their staffs' professional development. Researching professionals are in a uniquely privileged position as members of the organisation, or participants in the process, that they are studying. Such an 'insider researcher' "possesses intimate knowledge" of "the community and its members" (Hellawell, 2006, p.483) that form the subject of enquiry, in ways that are denied to external researchers. This intimacy is clearly an advantage in terms of access to and cultural understanding of the subject organisation. But at the same time, there are significant "hidden ethical and methodological dimensions of insiderness" (Labaree, 2002, p.109) which demand that a researching professional be especially reflexive. I therefore formulated critical questions to interrogate the ways in which my positions and identities could distort or prejudice what I looked for, how I looked for it, and my representation of what I might find.

Item 1. Membership identity

The first item on this agenda was my 'membership identity' as a researching professional. My position was both *emic* (as a professional member of the organisation being studied) and also *etic* (as a doctoral researcher seeking to draw generally applicable conclusions from the particular culture being studied) (Morris, Leung, Ames & Lickel, 1999). I was thus located in at least two communities of practice (Wenger, 1998), my workplace and my doctoral course at university, and these communities may have had different values, assumptions and priorities. In the case of education, I have detected tension between the two communities in that many school teachers do not regard the work of educational researchers as relevant on a day-to-day basis to their own practice. This dichotomy has been entrenched by recent changes to initial teacher training (ITT) in England which position teaching as a technical craft, place it in a marketised and performative context, and see ITT as largely a matter of practice acquisition (Brown, Rowley & Smith, 2016). A gap in perceptions of the value of research activity has been found in a range of professions including education, social work

and medicine (Hammersley, 2001; Bellamy et al., 2013; Greenhalgh, Howick & Maskrey, 2014). Thus, critical questions to ask here were whether I valued my research activity more highly than did my workplace colleagues, on whose co-operation I depended to conduct my research; and what effect that difference would have on my research.

Insider researchers may find it easier to recruit participants for their research because they can make a request through established and trusted channels that are not open to an external researcher. But the research relationship is complicated by the fluid or 'dynamic' position that the researcher occupies in the workplace, a blend of involvement and detachment which may vary in time and space (Mullings, 1999). For example, someone who has formal authority at work over people who agree to participate in the project faces a substantial challenge when moving into the position of researcher. Could responses to the project, including agreement to take part at all, be said, with confidence, to be free of the influence of the workplace relationship? It has been argued that insider research must therefore be regarded as socially shaped (Loxley & Seery, 2008), but clearly there are dangers in using a research framework in which concepts and culture are shared by the researcher and all members of the project sample. Due to practical and ethical concerns uncovered by reflexive questioning, I decided not to include my own school in my sample, and I did not have any previous direct relationship with the schools that I did include. In this way, I attempted to develop and maintain a 'critical distance' between my simultaneous *emic* and *etic* positions (that is, to put aside prior assumptions and tacit understandings which were based on my own professional experience) (Appleby, 2013). The issue of 'critical distance' is considered under the second item on this agenda, which I discuss in the next section.

Item 2. Difficulty of maintaining a 'critical distance'

A question raised about research conducted by researching professionals is whether they can achieve sufficient 'critical distance' from their workplace and colleagues to produce valid and reliable evidence about them (Drake with Heath, 2011; Sikes & Potts, 2008). Conversely, the ethnographic and anthropological research traditions favour the observer's 'participation' in the target culture on a spectrum of degrees of immersion (Spradley, 1980; Delamont, 2004). In some professional settings that are not comparable to those commonly studied by ethnographers and anthropologists, a limited 'negotiated interactive observer' position may be more acceptable to participants than full or partial immersion (Wind, 2008).

Although 'critical distance' might be achieved at the moment when analysis is carried out, it does not appear possible for researching professionals, who are always members of their organisations, to occupy permanently a non-participatory position. It may therefore be helpful

to think of position in relative terms, as on a continuum. Some people are 'relative insiders', and some are 'relative outsiders', depending on their and on others' perceptions of their membership identity (Griffiths, 1998). Thus a professional who maintains effective relationships with work colleagues while also accessing their (possibly shared) experiences for research purposes could be thought of as a 'relative insider'. A professional whose research activity is regarded with some suspicion by colleagues, possibly because they believe it to be a form of management snooping, could be seen as a 'relative outsider'. But no position is comfortable for the researching professional. Relative insiders may face the charge of being too distanced from the workplace community of which they are part: they have found a voice for themselves, but it may not be the voice of others in the community. They may be accused of selling out to the norms of university-based academic research. Relative outsiders may face charges of exploiting the workplace community, of hijacking the voices of its members, or of strengthening stereotypes (Griffiths, 1998). Critical questions to ask under this item included interrogating how events, conceptual categories, and assumptions on the part of both the participants and myself as the researcher, might have been produced by particular institutional practices, values and cultures.

I took some solace from the view that it is the task of insider research to identify such socio-political and historical factors which influence practice; to open up issues of values; to integrate the professional with the personal (both for the researcher and for the subjects of research); and to be educative for all participants (Reed & Proctor, 1995). From this perspective, my position as a researching professional could be seen as productive rather than limiting, in that these research aims could not readily be achieved by someone entering the field from the outside: being part of the organisation and its processes was essential to understanding the case. 'Intimate knowledge' gained in this way is the third item on this Agenda, which I deal with next.

Item 3. Intimate knowledge

It has been argued that a researcher's lack of knowledge of the history and culture of the particular organisation under study should be made part of the critique of external research more often than it is (Smyth & Holian, 2008). Concerns over the practical and ethical tensions of insider research can be balanced with the unusually privileged access that the researcher has as a member of the workplace community. There may be difficulties in negotiating exactly which parts of the organisation (people, operations, information) may be investigated, but insiders are in a position to use knowledge that they already have, such as awareness of organisational priorities and existing channels of communication, to pursue these negotiations (Brannick & Coghlan, 2007).

But the professional burden of 'insiderness', in this respect, is 'guilty knowledge' (Williams, 2010). This term means any knowledge that a researcher has that may do another person harm. If the researcher recognises that harm may arise, then an appropriate ethical assessment can be made, leading to a decision about confidentiality. A more complex instance could arise if the researcher acquires knowledge which has significance that the participant and the researcher are unaware of. Examples might include self-compromised anonymity, where participants unintentionally render their identities detectable; and courting professional risk when participants voice their own concerns which the researcher does not recognise as detrimental to their standing in the organisation. Potential damage caused by such 'guilty knowledge' can be revealed through critical reflection on the part of the researcher, possibly using intimate knowledge of the community to weigh professional judgements against research judgements (Dobson, 2009), and in some instances allowing the former to trump the latter. I developed key questions that could help to address and balance these two lenses: 'In whose interests am I asking this question?', 'Who might be damaged by this information and how?' and 'How can I represent work colleagues' experiences and views both accurately and without detriment to them?'

The types of knowledge that I had, acquired or created by virtue of my multiple positions needed to be subjected to reflexive scrutiny. This challenge is addressed in Agenda Two, which is discussed in the next section.

1.6.3   Agenda Two: producing knowledge for various purposes

The focus of a professional doctorate is usually on a problem or activity, customer base or community with which the student is already familiar through working in or with it, with the aims of understanding it better (that is, to create knowledge), and of effecting improvement to how it works (that is, to contribute positively to practice) (Taylor, 2007). The kinds of knowledge that are valued for these purposes are considered in the following items under Agenda Two.

Item 1. Modes of knowledge generation

As a researching professional, I could have assumptions and ideas about what I expect to find out based on my experience as a practitioner (Drake with Heath, 2011). This approach to enquiry could influence the type or 'mode' of knowledge that I could produce. While Mode One knowledge is seen traditionally to reside in discrete disciplines focused in universities, Mode Two knowledge is seen to be trans-disciplinary and generated through practice or experience (Gibbons, Limoges, Nowotny, Schwartzman, Scott & Trow, 1994). The

knowledge that researching professionals may produce, founded on or responding to what they already know about their workplace, is thus more closely aligned to the 'new', practice-oriented Mode Two than the 'traditional', university-oriented Mode One. But as a doctoral *student*, I faced the problem of also satisfying the particular demands of the academy in how I formulated and presented the knowledge that I produced, so as to qualify for doctoral status. I had to "transform [my] existing models of professional knowledge and replace them with a critical and analytic reflection" (Drake with Heath, 2011, p.18).

This key academic demand could be approached by paying attention to further modes of knowledge which the researching professional produces, but which might otherwise remain unspoken or even unconscious. Scott, Brown, Lunt & Thorne (2004) have proposed that 'professional doctorates' suggest four modes of knowledge in all: in addition to Modes One and Two, they identify Mode Three, centred on conscious deliberation and reflection about the topic of study by the individual student, which is non-teachable; and Mode Four, centred on the development of the individual through the critical, self-interrogative practice of reflexivity. Mode Four chimes with the personal development, general intellectual interest and career advancement identified as reasons for undertaking a doctorate (Leonard, Becker & Coate, 2005; Gill & Hoppe, 2009). It thus appears that researching professionals are likely to value knowledge about themselves as a key element of the knowledge that their projects create. If this self-investigation is framed reflexively and foregrounded in the project's outcomes, then it could be used to satisfy the common academic requirement for critical reflection in professional doctorates (Boud & Walker, 1998; Lucas, 2012). Critical questions that I developed to use here included: 'Which assumptions and positions deriving from my professional experience have led me to ask certain questions and not others?', 'How has my framing of my analysis influenced the knowledge that I have produced?' and 'What are the possible misunderstandings of my data that my own assumptions and positions might cause?' My positioning as a researching professional seems to be key to the knowledge that I can produce. I discuss the connected issue of how my research project could be oriented under the following item.

Item 2. Orientations of research outcomes

For the theoretical perspectives on knowledge production considered under Item 1 to be transformative to the doctoral researcher who is juggling professional and academic careers, they need to be seen in the light of each individual student's situation. For example, in reflecting on the modes of knowledge that my own research might create, I had to consider the different 'orientations' of my project (Noffke, 1997; Rearick & Feldman, 1999).

Firstly, it was *situation-oriented* in that my focus was on a specific case, and one aim of the project was to make recommendations for action to the case organisation's leaders. The knowledge that would be valued for this purpose had a strongly local and instrumental bias towards the 'real world' in 'real time' (Costley, 2013). Dissemination was in the form of relatively brief reports delivered exclusively to the organisation's leaders, headed by an executive summary with a small number of targeted recommendations, and including a brief discussion of my survey findings. The leaders then chose to act or not act on my recommendations in the light of local priorities.

Secondly, my project was *policy-oriented* because I undertook a critique of a national-level school improvement policy, basing my judgements on one instance of the policy in action. It was possible, if only remotely, that policy changes might ensue from the dissemination of my research. In this orientation, dissemination was publicly in print and online; by presentation at conferences and other meetings of education professionals; and in non-specialist form such as industry magazines and social media platforms. My contribution to knowledge in this orientation was to a widely-distributed, opinion-based debate that might influence policy-making (Lomas, 1997; Alexander, 2014).

Thirdly, my project was *theory-oriented* in that a major requirement of my doctorate is to generate knowledge that could be expressed as theory, not merely to report the empirical observations from which that theory was drawn. I had therefore to relate my specific case to the wider academic literature and to other examples of the case. The theory orientation is primarily academic, and so the means of dissemination in this instance was by doctoral thesis (Bourner, Bowden & Laing, 2001). I did not expect the readership of the full-length work to be wide; for the theory generated by my research to have significant impact, it needed to be extracted from the thesis, slimmed down, and published in other, more widely accessible formats (Kamler, 2008) including some of those listed under my discussion above of policy-oriented outcomes.

To summarise Agenda Two, I recognised that as a researching professional I should ask critical questions about the types of knowledge that my research could produce. Questions included: 'How is knowledge production being influenced in both content and dissemination practices by the various orientations or purposes that my research has?' and 'What unexpected or under-valued modes of knowledge could I develop?'

The knowledge that I could produce as a funded researching professional was also influenced by a layer of ethical challenge, which I discuss in the following section under Agenda Three.

1.6.4   <u>Agenda Three: ethical challenges to the funded researching professional</u>

My own position as a researching professional was ethically complex in that my doctoral course was part-funded by the organisation to which I belonged, and which was the subject of my research. Based on interviews with higher education researchers, Williams (2010, p.257) warns that "advice to resort to criteria for well-designed research methodology … fails to offer protection from ethical complexity … Not far beneath the surface of such advice lies a reef of instrumentalist risk-benefit ethics". In reflecting on the ethical pitfalls of insider research in my own context, I identified four dimensions where bias or distortion could occur if I was insufficiently reflexive in my approach. What follows is a discussion of my experience in each of these dimensions, where I foreground my own dilemmas and detail the responses that I made. I do not claim to have found definitive solutions to these challenges, but I suggest that reflexive attention to these issues is an essential element in navigating the 'ethical reef' that Williams identifies.

Item 1. The obligation dimension

I was a middle leader in the school which led the organisation that was the subject of my doctoral research. I had the support of my Headteacher, who also formally headed the organisation. With the agreement of the 'steering group' of senior leaders which directs the organisation, he had authority to pay some of my doctoral course fees from the organisation's funds because my project was seen as a key element of the organisation's self-evaluation process. I was expected to research the effectiveness of the organisation and to report back periodically to the steering group, and was accountable to that body, so there was a sense in which I was bound to and by its leadership. I was indeed grateful for the opportunity to do a doctoral degree which I would not otherwise be able to undertake.

These pressures might be conceptualised as an obligation dimension to my research. I could be criticised for apparently producing findings which aligned with what the organisation's leaders thought needed to be said about the organisation's work – in effect, to tell them what they wanted to hear (Rossman & Rallis, 2012) – because I felt obliged to them for funding my project. In discussions with my Headteacher before enrolling on the doctoral course, he assured me that he did not expect an endorsement of the organisation's work, but would prefer an unvarnished, 'warts and all' account because it would be more genuinely and usefully evaluative for the leadership group's purposes. However, 'evaluation' was not *my* primary aim in designing my research: my aim was to produce valid research leading to the award of my EdD degree. This was an instance of the potential clash of perspectives created by different reasons for codifying and disseminating knowledge: the organisation's leaders saw me as an 'individual expert' whose research could be appropriated to their

particular purposes (Lam, 1997). The question of knowledge ownership is thus closely implicated in my first item on obligation. Critical questions to ask here included 'Who expects what of my project's outcomes?' and 'Who owns the knowledge that I am producing?'

The second item on this Agenda addresses the power that a researcher may appear to have by virtue of being funded, which I discuss next.

Item 2. The power dimension

Research in relation to practice may be compromised by significant power relations. The 'authorised' nature of my project, meaning that it had organisational approval and permission, raised the question of whether participants in my research would feel that they needed to respond in particular ways, or even that they were compelled to take part at all, because I might be taken to represent the organisation's leadership – a power dimension (Berger, 2013).

Reflexivity is a necessary counter to this threat because it "also means interrogating how we might be perpetuating particular kinds of power relationships, be advancing particular ways of naming and discussing people, experiences and events" (Kamler & Thomson, 2014, p.75). I recognised that as a researching professional I needed to be on constant alert for both overt and covert manifestations of power, and particularly so because I was funded by the organisation I was studying. Critical questions to use here included, 'What is the participant's professional relationship to me?', 'How does power circulate in that relationship?' and 'In what ways could power relationships affect what participants choose to say?'   This approach to reflexivity is indeed uncomfortable, or 'dangerous', because it demands attention to the participants themselves and to the issues that are important to them, not just to methodology and processes (Pillow, 2010).

The issue of securing participants' authentic voices is considered under the third item on this Agenda, which I discuss next.

Item 3. The authenticity dimension

In designing my research, I was highly conscious of the need to secure responses as free as possible from bias and distortion caused by power relationships or other positional threats (Kvale, 2006), thus following the well-understood ethical path of vigilance to ensure the authenticity of participants' voices (Denzin & Lincoln, 2000). However, given the unknowable threat of 'guilty knowledge' discussed above under Agenda One item 3, could commonly-

employed ethical precautions to secure participants' informed consent, to avoid detriment and to ensure privacy (BERA, 2011) be sufficient?

In connection with the ethical dimension of power relationships discussed under item 2 of this agenda above, the issue of deception would arise if, in attempting to reduce the influence of power, I did not fully identify myself and my position(s) to my participants (Griffiths, 1998). Concerned about this problem, and also in order to foster a collaborative atmosphere where openness was likely to thrive (Anderson & Anuka, 2003), I took the decision during the course of the interview phase to reveal a little more about myself (such as my workplace and job title, and my reasons for undertaking the research) than I had originally intended. This did not seem to alarm any interviewee, but led in most cases to an extended discussion of the topics at hand (James & Busher, 2006). I judged that a more open atmosphere was in tune with the values underpinning my research approach, a 'situated' ethical judgement that I believed I could justify because it promoted the authenticity of participants' voices.

A fourth dimension of ethical challenge to the researching professional, that of falling prey to assumptions and preconceptions about the workplace situation, is dealt with next.

Item 4. The prediction dimension

Given that I was researching in a familiar setting, I faced the threat of a possibly unacknowledged theoretical stance at the start of the project (Drake with Heath, 2011). This could be conceptualised as a predictive dimension – I could find what I was tacitly looking for or expected to see (Guba, 1981; Shenton, 2004).

My own disposition as a middle leader is towards the distributed and collaborative end of the leadership style spectrum. After more than 20 years in teaching, I am rather sceptical of centralised or top-down, 'hierarchical' initiatives for educational improvement (Fullan, 2001a; Fielding et al*.,* 2005). How would these values that I have as a practitioner shape or bias my approach as a researcher, even if they contradicted the obligation that I might feel to the organisation's leaders who agreed to fund my course (as discussed above under item 1 in this agenda)? My sceptical stance, or pre-disposition to be disappointed, might have appeared to be a sufficiently critical position to adopt: I would not automatically assume that because something is new, it must be better than what has gone before. However, was there a danger in going too far in the opposite direction and expecting an innovation to fail? Remaining neutral in the prediction dimension was probably impossible to achieve.

Kamler & Thomson (2014) propose that an acceptable response to the threat posed by predictive thinking is actively to use the first person to locate the researcher in the research. The various theoretical and dispositional influences on the researcher's stance, which might

otherwise remain hidden, can thus be voiced.   For example, I needed to state explicitly that "I favour a collaborative perspective in my own professional life": I could then acknowledge that this disposition would influence my understanding of the data that I collected. Further, such a practice would make the researcher's contribution to knowledge original, because the particular angle that an individual takes on a research problem constitutes the locus of originality (Dunleavy, 2003). This appeared to be a transformative practice of particular utility to me as a researching professional: the tensions caused by the multiplicity of positions, purposes and ethical challenges that I faced could be foregrounded and acknowledged, even if they could not ultimately be resolved.

1.6.5   Three agendas for the researching professional

These three reflexive Agendas are brought together, with the researching professional ('RP') at the centre, in the diagram shown below in Figure 1.1:
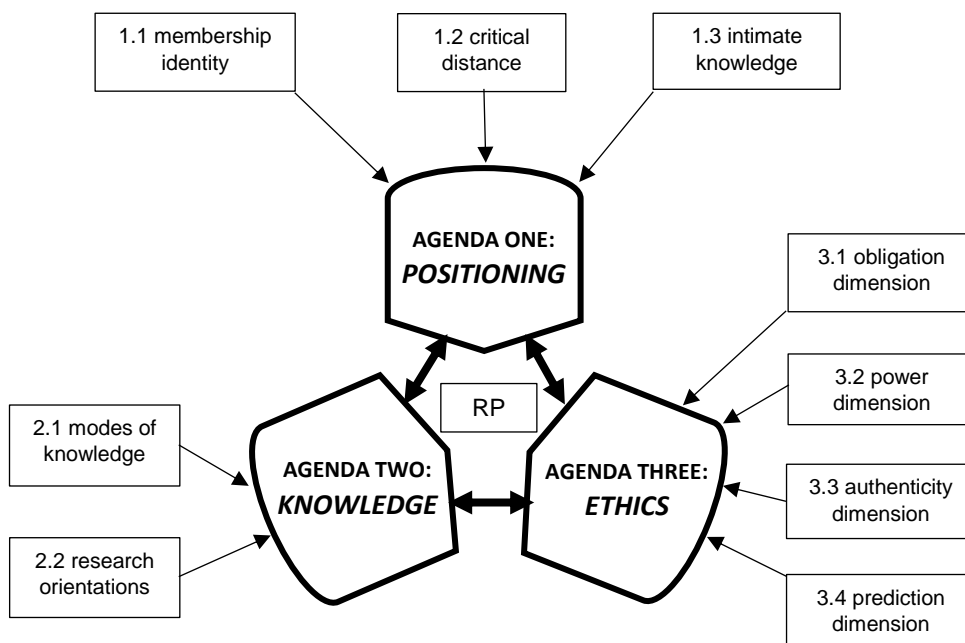
Figure 1.1:   Three agendas for funded researching professionals

This diagram uses the ideas and practices discussed in this section to suggest that, as a researching professional, I found myself surrounded by a number of threats to or pressures

on my research work. I sought to transform my doctoral research practice by paying constant reflexive attention to: (1) my fluid and possibly conflicting positioning in my communities; (2) the types of knowledge that I could produce and the reasons why different types may be valued; and (3) the ethical challenges that I faced as an 'insider' researcher funded by the organisation that I was studying.

The outcomes of reflexive self-interrogation may be uncomfortable both personally and methodologically, but that is all the more reason to engage in the practice. A researching professional in education has claimed that, "Through constant practices of surfacing and questioning hitherto underlying and taken for granted … assumptions, … concepts which I had hitherto considered stable, unitary and certain were made permeable, fragmented and less predictable" (Forbes, 2008, p.457). I suggest that this is a positive state for doctoral researchers to reach: I feel that I have been assisted on the journey towards it by the critical agendas for considering my practice and positioning that I developed during my research.

In Chapter Two which follows, I review the literature on change and on collaboration, the two major concepts relevant to my research on the influence of a teaching school alliance on the professional development of its serving classroom staff. I also introduce and critique two theories which I use as analytical frameworks in discussing my findings: the diffusion of innovations (Rogers, 2003), and the ecological systems model of human development (Bronfenbrenner, 1979, 1989).

Chapter Two
Literature Review

This Chapter reviews the existing literatures on change and on collaboration, which are the two major concepts relevant to my research on the influence of the teaching school alliance innovation (a collaborative grouping of schools) on the professional development of classroom staff (which is how teachers and teaching assistants experience change efforts at an individual level). I then introduce and critique two theories which I go on to use as analytical frameworks in discussing my findings in Chapter Five: the diffusion of innovations (Rogers, 2003), and the ecological systems model of human development (Bronfenbrenner, 1979, 1989).

2.1   Change in organisations

I begin this Chapter with an overview of the literature on change in the fields of business administration and organisational management theory. Remarkably, there has been little reference to this body of work in discussions of educational change efforts (Lim, 2010). Because the specific field of educational change management is less well-established than that of organisational change in general (Lieberman, 2005), I argue that there is merit in detecting and evaluating parallels between change in education and change in business. Schools are organisations composed of people in a more or less hierarchical structure just as businesses are, so they are likely to share some common characteristics such as requiring the effective management of people and of the organisation in order to achieve their goals (Morrison, 1998). However, I also acknowledge that schools demonstrate some features that separate them from purely commercial undertakings, and therefore I also discuss change in educational settings separately in section 2.2 of this Chapter.

'Innovation' has been defined simply as a change that creates a new dimension of performance (Drucker, 1985). A wide range of conditions necessary for organisational change has been proposed by various commentators, although agreement between them is not easy to establish. Straglas (2010) offers a comparative analysis of three widely-accepted models proposed by current, leading scholars of change in business settings: she distinguishes between the descriptive 'process' models developed by Bridges (2003) and Schein (2004) that can be applied at an organisational level, but are typically discussed at

the individual or team level; and the instrumental 'implementation' model developed by Kotter (2012), which offers guidance for large-scale change management efforts and is more closely related to organisational behaviour, in that it targets macro-level organisational theory. I have added to her analysis later work by Hayes (2014) which combines a 'process' approach with an implementation-oriented sense of managing change as a "purposeful, constructed and often contested process" (Hayes, 2014, p.26). A summary of the key elements of each of these four major models is shown in Table 2.1 below:

Table 2.1:   Comparison of change process and implementation models (after Straglas, 2010)

Bridges (2003)	Schein (2004)	Kotter (2012)	Hayes (2014)
Three stages:	*Three stages:*	*Eight stages:*	*Five stages:*
Ending, losing, letting go	Unfreezing/ disconfirmation	- establish sense of urgency - form powerful guiding coalition - create a vision	- recognising need for change & starting process - diagnosing what needs to change & forming vision
Neutral zone	Cognitive restructuring	- communicate the vision - empower others to act on the vision - plan for & create short-term wins	- planning - implementing change & reviewing progress - sustaining change
New beginning	Refreezing	- consolidate improvements & produce more change - institutionalise new approaches	*and two continuities:* - learning - leading & managing people issues

The table above shows, in abbreviated form, the major stages identified by scholars in the *process* of change (Bridges, Schein) and in the *implementation* of change (Kotter, Hayes). Both Bridges and Schein take a psychological approach (building on the seminal work of Lewin, 1951) which stresses the unsettling effects of change, and focuses on producing an environment of psychological safety where purposeful problem-solving and learning can take place without loss of identity or trust. However, this approach typically lays emphasis on negative aspects of the change process and has less to say about the actions to be taken when implementing change. Taking a different, action-based approach, Kotter identifies specific steps necessary for successful transformations. The stages of this model can be cross-referenced with Hayes' version, which has similarities to Kotter's but uses two

'continuities' (*learning* from feedback and mistakes as the process goes on; and *leading and managing the people issues* in terms of communication, establishing trust and empowering others) which are implicated in all five stage of his change model.

The barriers to change in organisations that these models are intended to overcome have been identified as: lack of awareness of what needs to change; lack of knowledge of up-to-date practices; unwillingness to change due to external pressures, to a resistant group culture, or to low internal self-motivation, desire and drive; individual attitudes and beliefs, including fear of change, and perception of benefits versus costs of change; difficulty in learning the new skills required by a change; ineffective management of change by organisational leaders; practical barriers including lack of time, resources, personnel or infrastructure; and external factors beyond the individual's or organisation's control such as the financial and political environment (NIHCE, 2007; Lozano, 2013). It has been pointed out that employee resistance to change may not necessarily be intended as disobedient or obstructive, but may reflect employees' ethical principles, or their desire to protect the organisation's best interests (Piderit, 2000).

Although the business and education settings are different, I believe that there is merit in applying these influential models of organisational change to my particular case in order to see whether I can derive credible explanations for my findings. The very substantial corpus of evidence drawn on by these scholars suggests to me that their analyses are robust and well-founded, and are worth considering when investigating change in other settings, even if some scholars deny the usefulness of placing research before practice (Fullan & Boyle, 2013). I therefore propose blending what seem to be the commonly-agreed core factors in these business-based models into a framework for analysis which I apply to my empirical research findings in Chapter Five. I propose that the core factors drawn from the literature of change in organisations that I have examined above can be synthesised in the following concepts:

- **surrendering the status quo** (accepting the need for change)
- **powerful guiding coalition** develops a **vision** of change
- **effective communication** by change leaders to stakeholders
- **implementing and sustaining** change via empowering of stakeholders.

These concepts can be identified in one guise or another in each of the four major models of change presented above in Table 2.1. I suggest that they are useful in providing a well-evidenced foundation for analysis of change in educational settings, although the particular characteristics of schools and education systems mean that this body of ideas is not sufficient in itself to explain what is intended to happen, and what actually happens, during

educational change efforts. In the following section, I examine the complexities of change in educational settings in the light of the current literature.

2.2   Change in educational settings

The management of change specifically in educational settings is receiving increased attention as recent reforms around the world grant schools more power over decisions aimed at improving pupils' learning outcomes, even as accountability demands also increase (Holmes, Clement & Albright, 2013). School and system leaders need to know how to go about achieving their visions of change in a climate of external, policy-driven turbulence (Cousin, 2018; Beabout, 2012; Crowson, 2003; Fullan, 2001a, 2001b) which plays a significant part in the framing of educational change as technical and functional (Gunter, Hall & Mills, 2014).

In a review of general principles for leading educational change, Soini, Pietarinen and Pyhältö (2016) offer an analysis of factors implicated in the success or failure of school reform which has some echoes of both the psychological, 'process' approach and the action-oriented, 'implementation' approach to change management in the business organisation field which I discussed in the preceding section of this Chapter (section 2.1). A summary of these ideas with references to supporting research is shown in Table 2.2 below:

Table 2.2:   Summary of key factors in educational change (after Soini, Pietarinen & Pyhältö, 2016)

Factor	Research support
Quality of leadership by principals/headteachers	Day, Leithwood & Sammons, 2008; Leithwood & Duke, 1999; Spillane, 2004; Spillane, Halverson & Diamond, 2004
Developing learning culture of school's staff …	Fullan, 2001b, 2002, 2014; Honig, 2004; Senge, 1990
… with focus on pupil learning	Robinson, 2011; Leithwood & Seashore Louis, 2012
Coherence-making	Fullan & Quinn, 2016; Hargreaves & Fink, 2004; McLaughlin & Mitra, 2001; Fullan, 2001a
Enduring uncertainty/risk	Wood, 2017; Shapiro & Gross, 2013; Fullan, 2001a; Stoll, Fink & Earl, 2003
Maintaining basic functions of school	Camburn, Spillane & Sebastian, 2010; Everard, Morris & Wilson, 2004

The table above shows a summary of factors which a range of researchers have proposed as being important in leading sustainable school reform. It is clear that substantial research attention has been paid to the change leadership activities of principals and headteachers, work which is often focused on leading the professional learning of the school community and on building coherence inside the school. These factors could be interpreted as being similar to the 'process' approach to change in that they seek to achieve a shift in perceptions of or attitudes to improving pupils' outcomes by negotiating the meaning and acceptance of the reform between actors at different levels of the school system. This approach builds on Senge's 'learning organisation', the aim of which is to harness individual workers' thinking into "shared 'pictures of the future' that foster genuine commitment and enrolment" (Senge, 1990, p9).

On the other hand, the work of school leaders in crafting coherence between reform aims and everyday practices, all the while maintaining the day-to-day functions of the school, could be seen an instance of the 'implementation' approach taken by Kotter (2012) and Hayes (2014): particular actions need to be identified, communicated, enacted and reviewed (Hattie, 2009; Segura Pirtle & Doggett, 2013; Robinson, 2011; Copland & Boatright, 2006). Dimensions that require action when implementing educational change are said to include: focus on student learning as the primary goal; leading teaching and learning; ensuring quality teaching via use of data and evidence; strategically aligning resources with learning improvement goals; ensuring an orderly and safe environment; and engagement with the wider community of stakeholders.

Promoting and sustaining change in serving teachers' practice has proved to be "much more complex than had been anticipated" (Fullan, 2001a, p.17). The intensely social nature of schools coupled with their relentlessly pressurised ways of working mean that changing habitual behaviours "requires will and skill, capacity and understanding and commitment, and developing these requires considerable and carefully designed effort" (Levin, 2008, p.81). Kirkland & Sutch (2009) identify interrelated barriers to change in educational settings as including: contextualisation and adaptation of innovations to suit local needs (after Papert, 1997); 'first order' or external issues such as lack of time, effective training or technical problems in implementation; and 'second order' or attitudinal issues such as lack of confidence, negative attitudes to the change including fear of failure, and lack of perceived benefits of the innovation. This complex of external and internal barriers may be seen as contributing to a culture of 'risk aversion' against change in educational settings (Renfrew Knight, Bryan & Filsner, 2009; Sutch, Rudd & Facer, 2008).

Fullan (1992) proposes that leadership of change is likely to be more effective through promoting slow, evolutionary "rolling change" (p.9) which teachers can eventually feel that they own, rather than by imposing change from above in response to rapidly changing

priorities. Higham, Hopkins and Matthews (2009) point out that a small number of committed leaders can be a powerful force for improvement, but acknowledge the findings of Huxham and Vangen (2005) regarding the problem of inertia in the face of a leader's efforts to bring change to an organisation. The literature on change in the business setting echoes the pitfalls of overly prescriptive goal setting: "managers and scholars need to conceptualise goal setting as a prescription-strength medication that requires careful dosing, consideration of harmful side effects, and close supervision" (Ordoñez, Schweitzer, Galinsky & Bazerman, 2009, p.2).

While identifying other improvement factors related to pupil and parent engagement, curriculum and data, Levin claims that "The most important single support … is ongoing training in the context of people's real work settings" (2008, p.125). Two major and connected obstacles to such an approach in the British context appear to be, on the one hand, the conceptualisation and practice of teachers' professional development and, on the other, the extreme pace of change which schools and teachers have faced. In the following section, I examine approaches to the professional development of classroom staff as a key element in achieving sustainable change in educational settings.

2.3   Classroom staff's professional development

The formalisation of continuing professional development (CPD) for serving classroom staff was pursued by professional associations in the 1980s (Friedman, Davis, Durkin & Phillips, 2002), drawing on ideas about in-service training proposed a decade earlier in the James Report (DES, 1972). A unified and widely-agreed definition of CPD is elusive and the notion is contested (Kennedy, 2005, 2014a). Bubb and Earley (2007) provide a simple version, describing CPD as creating opportunities for adult learning to enhance the quality of education in classrooms. Day's (1999) earlier definition highlights the importance of teachers' roles as change agents with *moral purpose* in the classroom, which is a key element of Fullan's (2005) view of teacher effectiveness. The suggestion by Friedman et al. (2002, p.3) that CPD is "a framework of learning and development activities which are seen as contributing to one's continued effectiveness as a professional" appears to place the individual at the centre of the process. This notion has been built on by several recent models of professional development (Guskey, 2002; Clarke & Hollingsworth, 2002; Desimone, 2009; Opfer & Pedder, 2011; Evans, 2014) which identify individual agency as either a necessary condition or an emergent outcome of the change processes proposed (Boylan, Coldwell, Maxwell & Jordan, 2017). The 'State of the Nation research project' on schools and CPD in England found that teachers tended to view the benefits of participating in CPD as 'individualist', framed more in terms of individual fulfilment than for collective or

collaborative reasons (Pedder, Storey & Opfer, 2008; Pedder & Opfer, 2013). This finding has been developed in empirical work in other jurisdictions which identified teacher-led, self-directed, transparent, and practically-oriented professional learning as particularly effective in the eyes of teachers themselves (Campbell, Lieberman & Yashkina, 2013; BCG, 2014), and in research on teachers becoming self-regulated learners (Mujis, Kyriakides, van der Werf, Creemers, Timperley & Earl, 2014).

But classroom staff in England have rarely found that their particular interests and needs are prioritised in school-based CPD (Antoniou, Kyriakides & Creemers, 2015), which has often been arranged to meet nationally-determined training requirements and is quite different from professional, or 'on the job', learning (McNeill, Butt & Armstrong, 2016). Following the creation of five in-service training days in the school year by the Education Reform Act 1988 (the so-called 'Baker Days'), CPD was rapidly appropriated by school leaders for the purpose of securing the implementation of central government policy initiatives (Hopkins, West, Ainscow, Harris & Beresford, 1997). It has been suggested that the same is largely true of education systems in other parts of the world (Levin, 2008; Lloyd & Davis, 2018). A solution to the problem of where to locate the individual in a viable model of effective professional development has yet to be identified.

As the search goes on, educational scholars have tried to apply social theories of learning such as Granovetter's (1973, 1983) 'strength of weak ties' model, which emphasises the importance of asymmetries between parties in the transfer of knowledge, although Hakkarainen, Palonen, Paavola and Lehtinen (2004) argue that strong ties are more influential because of similarity of situation and concerns. The social contagion model proposed by Gladwell (2000) has been adopted by David H. Hargreaves (2003) for his theory of 'education epidemic', but his examples drawn from software development and hacker culture do not correlate well to the working experiences of staff in schools. However, the importance of professional learning in a social environment appears to be well understood.

Fielding et al. (2005) find particular value in personal connections between teachers, which could be seen as a form of the socially-situated 'participation metaphor' of learning identified by Sfard (1998). Although there are acknowledged to be problems in establishing trust when power relationships are disparate (Gregory, 2017), the relatively high degree of trust in some personal connections can enable knowledge creation and transfer more readily than the top-down, transmission approach which has been taken by implementation-focused training (which tends to follow Sfard's 'acquisition metaphor' in treating knowledge as a definable commodity). The central element of this people-centred approach is 'joint practice development' or JPD, which envisages not the wholesale transfer of one person's practice to another person, but rather the adaptation and refinement of an innovation to fit with existing practice through a co-productive joint venture between the participants (Fielding et al., 2005).

Recent empirical research supports the construct of 'collective sense-making' (Ng & Wilson, 2017) whereby teachers challenge and support one another as professionals so that tacit and implicit knowledge is mobilised (Jensvoll & Lekang, 2017). Hopkins (2007) seeks to scale up this approach to school level by advocating the building of infrastructures and time for staff development into a school's daily routines. The potential of JPD to transform the way that teachers learn and to secure sustained change has been claimed by others who have incorporated the practice into their proposals for a self-improving school system (Hargreaves, 2011; NCSL, 2012b; Matthews & Berwick, 2013). A pressing difficulty, however, is that useful knowledge that is in the system is rarely effectively managed such that it can be disseminated beyond individuals or small groups and embedded into a whole system (Matthews & Berwick, 2013).

The impact of individual participants' own priorities is recognised as a potential weakness in moving an organisation through change: the process can be seen as a "co-operation task" which "each actor enters … with [his/her] own objectives" but problems may arise "as a consequence of uncertainty about the actions of interdependent actors" (Gaglyuk & Hanf, cited in DiDomenico, Vangen, Winchester, Kumar Boojihawon & Mordaunt, 2011, pp.51-53). No school leader can predict with certainty how any individual teacher will respond to innovation, but it is likely that some teachers will not respond in ways the leader intended. This may be due to differing 'definitional lenses' when considering the driver of innovation: some teachers may see the innovation as merely a 'consumerism-driven' product and therefore as not meeting their 'professionalism-driven' interest in the moral purpose of change (Dudau, Kominis & Szocs, 2018). Teachers' beliefs about teaching and learning – which tend to be rigid and persistent, serve as a filter to knowledge, and help an individual define and understand environment (Pajares, 1992) – are thought to have a significant influence on their willingness to appropriate educational innovations (de Vries, van de Grift & Jansen, 2014; Ng & Wilson, 2017). Ownership of change by individuals, and thus the likelihood of effective change being sustained, is claimed to be enhanced by collaborative development work between teachers (Greany & Maxwell, 2017).

This bottom-up, distributed perspective suggests that attention should be paid to "the influence of street-level implementers" who "actually determine how much change is enacted" (Fullan, 1992, p.19). In their analysis of the London Challenge collaborative improvement programme (a predecessor of the teaching schools programme which will be examined in more detail later in this Chapter), Higham et al. (2009) do indeed recognise the importance of link work or brokerage by change agents who can help to contextualise new knowledge – useful because 'pre-packed' knowledge is suggested to have little impact over time. They focus on change agents at the level of school leaders, but there are also grounds for thinking that change agents throughout an organisation's levels may promote the spread

of knowledge about innovations. An application of social network theory to change in educational settings by McCormick, Fox, Carmichael & Procter (2011) identifies a range of 'nodes' in teachers' networks which help to transfer knowledge – not only named individuals, but also entities such as roles, groups both formal and informal, the organisation, the community, and constructs or conceptual entities. A similarly distributed approach is advocated by Rea et al. (2015, p.7), who include student leaders as well as middle leaders, because "building personal relationships is key to getting effective joint work going, though sometimes the relationships come out of doing things together."

In terms of the knowledge content that needs to be transferred, Levin (2008) points out that teachers have very few of the standard practices which are collectively adopted by other professionals such as surgeons and nurses, engineers and airline pilots, with the aim of improving the quality of their work. But he argues that creating such practices is quite possible and indeed desirable if they improve students' outcomes. The key is to understand that "it happens not through mandates but through carefully organised social processes that build understanding of the practices, awareness of their value, capacity to implement them, and pressure to use them" (Levin, 2008, p.104). This argument echoes the findings of a range of commentators including Fullan, who stresses the importance of a "shared consciousness about the goals and organisation of their work" which mean that teachers are "more likely to incorporate new ideas directed to student learning" (Fullan, 2001a, p.46). Planned change which seeks to leap from private thoughts to public implementation is likely to fail because it does not acknowledge others' realities or local contexts and cultures. Recent work by Oliver et al. (2017) on how teachers represent their professional knowledge shows that teachers value most the artefacts that they create and share themselves.

These various influences on the professional development of serving classroom staff are summarised in Table 2.3 below:

Table 2.3: Summary of influences on the professional development of serving classroom staff

Factor	Research support
Hierarchical, top-down training	Hopkins et al, 1997; Fielding et al, 2005
- focused at school level	Harris, 2001; McNeil, Butt & Armstrong, 2016
- not at individual level	Morrison, 2008; Antoniou, Kyriakides & Creemers, 2015
Heterarchical co-construction	Hargreaves, 2011; Greany & Maxwell, 2017
- social and shared	Fullan, 2001a; Hakkarainen et al, 2004; Kennedy, 2011
such as Joint Practice Development	Fielding et al, 2005; Matthews & Berwick, 2013
- 'disciplined' innovation	Hargreaves, 2003
- formally organised	Hopkins, 2007; Cordingley et al, 2005
Informal, 'undisciplined' innovation	Hargreaves, 2012; OPM, 2008;
- lucky, not planned	Mourshed, Chijoke & Barber, 2010
Innate characteristics of individual	Rogers, 2003; OECD, 2009; van der Heijden et al, 2015; de Vries, van de Grift & Jansen, 2014; Ng & Wilson, 2017
Environmental conditions	Fielding et al, 2005; Payne, 2008

In the following section, I synthesise these modes of activity into a conceptual map of influences on an individual's professional development, and I suggest the place that a teaching school alliance's work in the CPD strand might occupy in my conceptual map. In Chapter Five of this thesis, I go on to use this map to help analyse my empirical research findings about the influence that a teaching school alliance appears to have on the professional development of serving classroom staff.

2.4   A conceptual model of influences on classroom staff's professional development

Through a synthesis of the research evidence discussed above, I define classroom staff's professional development as *activities that develop an individual's skills, knowledge, expertise and other characteristics so that both teacher and pupil performance are improved.* In adopting this definition, I draw principally on the definition offered by TALIS (OECD, 2009, p.51), supplemented by recent work on the link between effective teacher performance and improvement in pupil outcomes (Bubb & Earley, 2007; Timperley, 2008, 2011; Stoll, 2015).

There is a broad range of research evidence in different fields and traditions on factors which affect the transfer of skills, knowledge and expertise. Several of these ideas are helpful to

me in conceptualising the possible influence of a teaching school alliance's CPD activities on an individual teacher's professional development.

I conceptualise three **domains of influence** on the continuing professional development of classroom staff which I define as:

- **hierarchical domain**, founded on power relations, 'done to' the teacher and often not chosen by participants;

- **heterarchical domain**, founded on collaborative relationships between participants, 'done with' other professionals by choice;

- **innate domain**, founded on personal characteristics and circumstances which determine the individual's disposition towards innovation.

These domains are further influenced by overarching **systemic and environmental conditions** which promote change or encourage inertia or resistance to change.

The relationship between these domains and the individual's professional development is illustrated below in Figure 2.1 below. Arrows show the direction of influence between domain and individual. The planned activities undertaken by a teaching school alliance in pursuit of the professional development of serving staff may fall within the hierarchical domain (such as mounting training events), or within the 'disciplined innovation' segment of the heterarchical domain (for example, promoting and brokering Joint Practice Development or JPD). The influence of the teaching school alliance on professional development in my conceptual framework is shown by arrows connecting the alliance to the domains that I suggest it is likely to influence. There are other domains which the alliance is not likely to influence – the 'undisciplined innovation' segment of the heterarchical domain, and the innate domain of personal characteristics and circumstances – but it may be that greater focus on these domains would be beneficial to professional development. These elements are, therefore, connected to the alliance by dotted lines to show potential influence. The terms used in the model are explained in greater depth in the section that follows the figure.
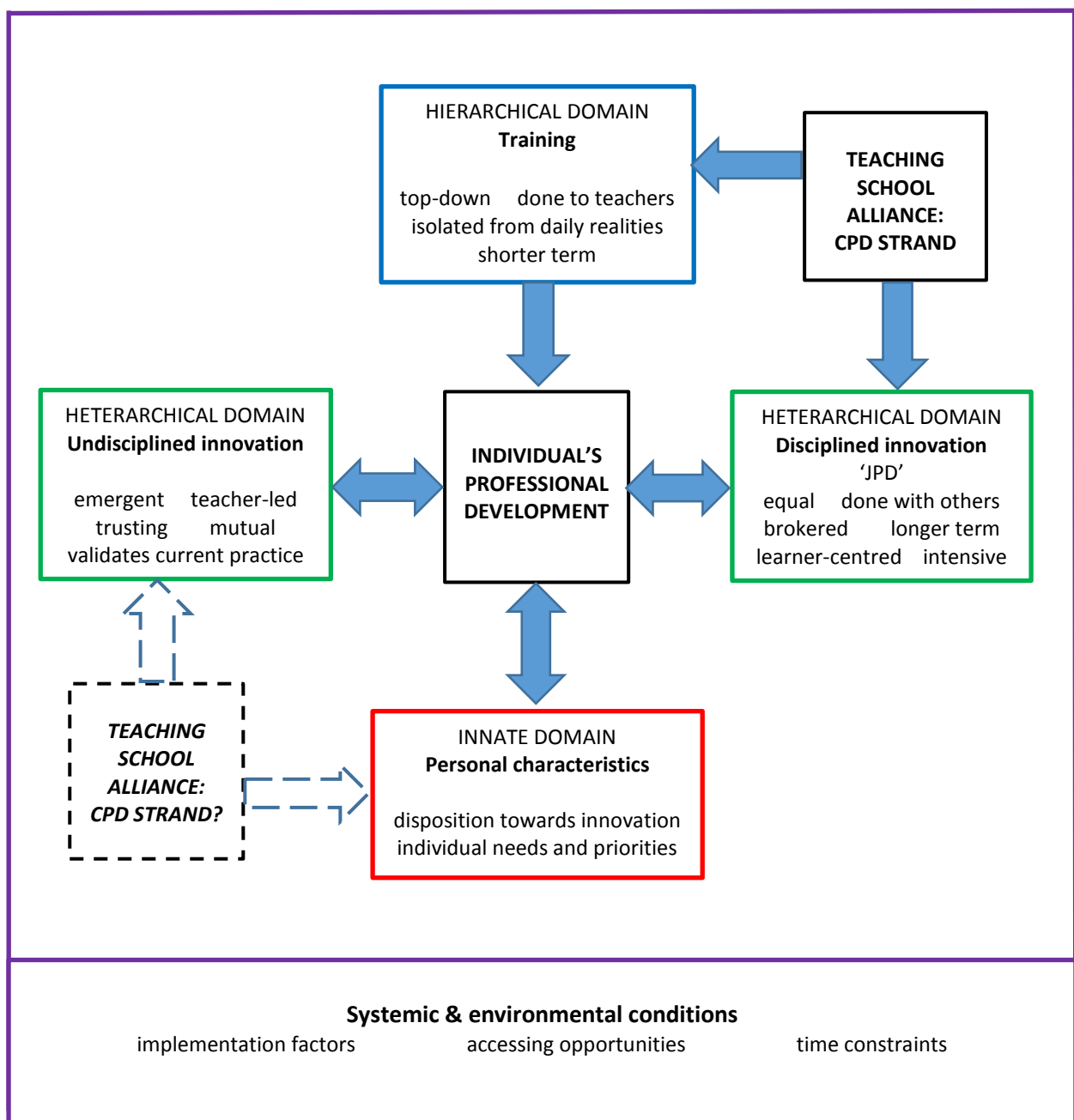
Figure 2. 1:   Conceptual model of the influences on classroom staff's professional development

The diagram above shows a conceptual map of the various domains of influence on an individual's professional development, and suggests where the CPD strand work of a teaching school alliance might fit into the map.

The educational professional development literature generally indicates that the dominant model of **hierarchical**, top-down transmission of information to a more or less willing audience, called 'training' or 'direct instruction', has little currency among teachers and does not lead to substantial or sustained changes in practice (Fielding et al., 2005; Morrison, 2008; Pedder, Storey & Opfer, 2008). A significant limitation of this mode is seen to be its isolation from the daily realities of school life at classroom and subject level (Harris, 2001). Such a critical evaluation has not noticeably reduced the frequency with which teachers meet the 'training' approach, however, and classroom teaching staff are all but certain to experience this mode of knowledge transfer during their careers. My subject Alliance did indeed offer professional development activities which fall under this heading. 'Training' must therefore feature in my conceptual framework as a major factor in the hierarchical domain of influence on teachers' professional development.

Recent work has claimed much greater impact for **heterarchical**, collaborative, learner-centred, reflexive professional development which validates existing practice as part of the teacher's quest to develop new ways of working (Burnes, 2004; Cordingley, Bell, Thomason & Firth, 2005; Kennedy, 2011). Called 'Joint Practice Development' or JPD when deliberately planned, this mode of knowledge creation has been proposed by a number of scholars (Fielding et al., 2005; Hargreaves, 2011; Matthews & Berwick, 2013) , and also in National College documents designed to support teaching school alliances (NCSL, 2012a, 2012b; NCTL, 2014), as a desirable form of professional development because it promotes learner engagement by focusing on individual needs and priorities; it demands shared responsibility for making improvements; and it can secure greater equality of outcomes across all participants because the hierarchical 'originator' and 'partner' roles of conventional school-to-school support are absent. Camburn and Han (2017) suggest that collaborating with peers on instructional matters or working with 'instruction experts' is the most effective form of professional development. Another term used to describe such deliberately planned and brokered co-construction of professional knowledge is 'disciplined innovation' (Hargreaves, 2003). A parallel form of unplanned, collaborative development work has been called 'undisciplined innovation' (Hargreaves, 2012), a term which identifies work that is not brokered or sanctioned by those in authority, but which emerges in interactions between people who have prior trusting relationships or who have sought each other out by 'unofficial' means. Both these variants of collaborative professional development are thought to be important in securing concrete changes to practice, and therefore need to be included in my conceptual framework. A review by Cerna (2013) suggests that attention has recently been

paid to ways of combining hierarchical, top-down and heterarchical, bottom-up approaches to professional development. I consider the possible relationships between hierarchical and heterarchical domains in analysing my empirical findings in Chapter Five of this thesis.

The **innate** domain of influence on professional development includes personal characteristics and circumstances of the individual. The diffusion of innovations model articulated by Rogers (2003), which I examine in detail in section 2.7 of this Chapter, identifies key **personal characteristics** which have a bearing on an individual's disposition towards innovation: previous practice, felt needs or problems, relative innovativeness of the individual, socio-economic status, personality variables, and communication behaviour. These characteristics are identified as key to innovative teachers in particular by van der Heijden, Geldens, Beijaard and Popeijus (2015). The importance of personal characteristics is broadly supported by OECD's analysis of data on teaching practices and professional development collected by the TALIS 2008 survey (OECD, 2009; Vieluf, Kaplan, Klieme & Bayer, 2012), which finds in every participating country a relatively small group of teachers who report a strong individual disposition in favour of innovation.

The OECD analysis also identifies **environmental conditions at school and system levels** (as does Rogers (2003) in terms of the social system in which the individual operates) which have a bearing on an individual's disposition towards innovation, including school size, autonomy in making decisions, leadership style, focus on learning rather than teaching, and the practice of regular appraisal and feedback. This view is developed by Furner and McCulla (2018) who argue that a teacher's professional learning is integrally related to his or her own school's ethos and culture. Payne (2008) suggests that successful implementation of innovation depends on a school or system where there is coherence, stability, peer support, training in using the innovation, and individual engagement in a shared vision for improvement. Fielding et al. (2005) note that a systemic tendency to 'stickiness' in implementation, a widespread diffidence among teachers in taking up development opportunities, and the overwhelming constraints of time, are barriers to the adoption of educational innovations. These ideas suggest that I need to pay close attention both to personal factors in my innate domain of influence, and to overarching environmental and systemic factors, because they are likely to underpin teachers' attitudes to their professional development. These attitudes may determine how teachers respond to activities in the hierarchical and heterarchical domains.

The heterarchical, socially-situated, co-constructive approach to formulating and adopting new practices is claimed to be key to successful reform. Would a switch to this collaborative strategy for change achieve more than has hitherto been accomplished by the conventional, top-down, transmission strategy? The concept of 'collaborative advantage' and its application to the education context will be examined in the next section of this Chapter.

2.5   Collaboration for advantage

Attention has recently been given to the perceived benefits, both economic and motivational, which accrue to staffs and schools which formally work together. I examine the concept of 'collaborative advantage' and its application to the education context in this section.

Co-operative, co-ordinated or collaborative modes of working have become the *sine qua non* of organisational improvement in both the private and the public sectors over the last twenty-five years (Mischen, 2013). Management scientists Huxham and Vangen define 'collaborative advantage' as the achievement of "whatever visions you may have by tapping into resources and expertise of others" (2005, p.3). The common reasons to pursue collaborative advantage in business are seen to be: access to resources; shared risk; efficiency; co-ordination and seamlessness; learning; and the moral imperative to alleviate key issues by joint action. Some of these goals may also apply to education, particularly the last in this list, but the conditions which influence collaboration between classroom staff and between schools can differ significantly from those experienced in business organisations.

Senge's work on the 'learning organisation' suggests that it is possible to expand an organisation's capacity to create results by harnessing individual workers' thinking into "shared 'pictures of the future' that foster genuine commitment and enrolment rather than compliance" (Senge, 1990, p.9). This notion has been refined by Wenger (1998) into the 'community of practice' where a group's cultural identity is determined by its shared procedures and rituals, both officially mandated and unofficially adopted. In education, classroom staff's practices largely take place when working alone in the classroom, but each individual is nonetheless part of the community of practice of teaching. Three dimensions of practice give a community its coherence: *mutual engagement*, *joint enterprise* and a *shared repertoire*, which are continually negotiated and learned through activity. The difficulty in applying this theory to teaching is that it is not clear to which specific community or communities an individual might belong: to a subject department, a school or grouping of schools, a whole educational system, or to all of them?

Further developments of these ideas which seek to deal with the problem of boundaries include the 'professional learning community' or PLC (most strongly in the United States), and its close cousin the 'networked learning community' or NLC. Stoll, Bolam, McMahon, Wallace and Thomas (2006) define a PLC as a bounded group which pursues knowledge creation and transfer between its members. The characteristics that are seen to make this community of learning effective include shared values and vision; collective responsibility; reflective professional enquiry; collaboration; and the promotion of group as well as individual learning. In this model, collaboration "go[es] beyond superficial exchanges of help, support or assistance" (*ibid*, p.227). Hord's (1997) definition of PLCs also includes supportive

conditions in the organisation. Hargreaves and Fullan (2012) conclude that positive outcomes from teacher-led PLCs occur where there is shared enquiry into real problems of practice, and where teachers take shared responsibility for the outcomes of their collaborative work. However, Harris and Jones (2017) caution against too glib an adoption of teacher self-regulation as a solution to professional learning: simply allocating time and resources to individual CPD is not enough. Rather, a systematic approach that shapes, defines and informs the collective effort is more likely to enhance professional capability, competence and confidence (Lieberman, Campbell & Yashkina, 2016). In this sense, the evidence base shows that focused, 'disciplined collaboration' can be a powerful vehicle for changing teachers' behaviour and improving pupil learning outcomes (Jones & Harris, 2014). A secondary analysis of the TALIS 2008 data set showed that collaborative development work in a PLC has statistically significant impact on teachers' 'instructional quality', and more impact than other forms of development activity such as traditional training and one-shot courses (Doğan & Yurtseven, 2017).

The implementation of PLCs in schools has not been without problems: they have proved difficult to establish and sustain, are not a panacea, and may not in practice lead to improved pupil performance (McLaughlin & Talbert, 2010; Timperley, 2008). A study of a US school district which had systematically implemented PLCs in all its schools (Voelkel & Chrispeels, 2017) found that PLCs need to be 'high functioning' in order to enhance participants' 'collective efficacy' (which the authors define as "teachers' shared beliefs within a school that they can collectively, significantly and positively influence student learning", *ibid*, p.506). In the terms adopted by the authors, 'high functioning' means agreeing collective goals; active engagement in analysing pupil performance data; and use of this information to improve teaching and pupil learning. However, the study acknowledged but did not attempt to measure the influence on collaborative development work of supportive leadership at school level, or of supportive conditions such as time to meet during the school day. It could be argued that these are necessary conditions for the effective and sustainable functioning of PLCs in schools (Gray, Kruse & Tarter, 2016; King, 2011; Cordingley et al., 2005), but that they are not always (or even often) met in practice. This may explain why some classroom staff settle for working on small projects that do not interfere with the overall running of the organisation, seeing themselves as 'daring outsiders' rather than as working within an inclusive and collaborative framework for change (Sales, Moliner & Amat, 2017).

Some scholars have suggested that the concept of 'professional learning community' itself is contestable – indeed, that "the term has become so ubiquitous it is in danger of losing all meaning" (DuFour, 2004, p.6). Problematic issues of exclusion (some people will be outside the community) and control (the community can be seen as a mechanism of governance) (Fendler, 2004) are raised by the common emphasis on 'shared values and vision' (Stoll et

al*., 2006), a concept that could be criticised as an attempt to mask difference in pursuit of orthodoxy. This could actually inhibit participant learning and organisational change because new ideas and practices have less space in which to emerge. It has been suggested that recognising what is *discordant* in values may therefore act as a driver for change (Watson, 2014).

A further significant problem for system improvement is scaling up the intensive work of a PLC which is dependent on strong ties within the bounded group, usually a whole school or a team within a school (Harris & Jones, 2017). One attempt to rectify this limitation, which was explored in a National College-funded programme between 2002 and 2006, is the 'networked learning community' model or NLC which explicitly promotes knowledge creation and transfer links beyond the individual school to other schools in the same locality. Jackson and Temperley (2006, p.6) use the key process of teachers "utilising their own know-how and co-constructing knowledge together" to define 'networked learning' as opposed to 'networking'. Collarbone and West-Burnham (2008) see 'networked' as meaning connected and note the role of information and communications technology (ICT) in linking staff who work in geographically-dispersed schools. However, a review of the NLC model suggests that the rate of knowledge transfer across schools can be significantly lower than within each school (Earl, Katz, Elgie, Jaafer & Foster, 2006). One reason for this apparent failure to exploit 'strong-tie' relationships through collaboration is that uncertainty remains about the interaction between a formal, networked learning community and the many localised professional communities (or 'communities of practice') rooted in the daily lives of schools. Indeed, investigations which seek to use a whole school or a within-school bounded group (such as a subject department or team) as the unit of analysis may ignore the many instances of boundary-spanning work that occur when individuals move from one institutional space to another (Little, 2005). Taking the 'weak-tie' idea further, Lawrence (2007) suggests looking at across-school knowledge transfer as a process of acceleration or catalysation rather than as instigation or replication.

McLaughlin, Black-Hawkins and McIntyre with Townsend (2008) identify less formalised networking among schools as a central element in helping leaders and teachers to learn and thus to improve their schools. They seek to join the practice of networking with that of 'researching schools' as championed by David H. Hargreaves (1996, 1999) to promote the concept of school-based academic enquiry which can be broadly and collaboratively disseminated via ICT close to the context from which it arises. They do however note that "the concept of the researching school is both relatively new and not necessarily clear" (McLaughlin et al., p.7). Their chief claims are: (1) networks are first and foremost frameworks for collaboration, involving a mixture of information sharing and psychological support; (2) networks are not just groups of people who communicate regularly with one

another: they are purposeful, and the purpose is to promote innovations; (3) the emphasis on voluntary participation indicates that networks are to some extent outside the system;   (4) the emphasis on equal treatment indicates that there is no particular intended direction of influence, neither 'top-down' nor 'bottom-up'; the intention is instead one of working laterally. This emergent view of collaborative learning for school improvement seems to run counter to the promotion in various guises of formal links between schools that has been attempted over the past decade (the chief examples of which will be examined in the next section of this Chapter).

Study of the landscape of English education appears to show that collaboration between schools is a wide but shallow phenomenon. Towards the end of the NLC experiment, Hill (2006) estimated that nearly all English schools were involved in some kind of partnership, although Hargreaves (2010) believes that not many schools were collaborating at a deep level. Keddie (2014) argues that networking at a deep level is hard to foster because it is socially complex, costly in economic and material resources, and runs counter to performative and competitive demands on individual schools. Indeed Higham et al. (2009) note the observation of Huxham and Vangen (2005, p.60) that "There has been much rhetoric about the value of strategic alliances, industry networks, public service delivery partnerships and many other collaborative forms, but reports of unmitigated success are not common."

Successful business alliances and partnerships are commonly defined by their capacity to yield benefits to all partners, to achieve "collaboration (creating new value together) rather than mere exchange (getting something back for what you put in)" (Kanter, 2002, p.100). The problem facing policy-makers, schools and scholars alike is to define what that 'new value' could be when the context is education, an activity which does far more than produce identical, countable units of output, and in which local variation can be far more pronounced than in other spheres of activity.

The current policy drive in England towards system-wide improvement is founded in part on the notion of 'collaborative advantage', but the policy is not a new one: there have been several previous versions at different levels and scales, both in England and elsewhere, not all of which have enjoyed 'unmitigated success.' The theoretical underpinning to system-level working, and its recent manifestations in practice, will be examined in the next section of this Chapter.

2.6   System-level improvement

In an English educational environment which has primarily instrumental goals, characterised by Greany (2014) as 'World class (no excuses)' and dominated by the hard currency of measurable progress in test results, it is perhaps surprising to find that a **moral imperative** is located clearly at the heart of current system-level improvement theory. The core value that drives such work is "a conviction that leaders should strive for the success of all schools and their students, not just their own" (Hargreaves, 2010, p.11). The important role played by moral values in establishing the trust necessary for effective co-working between groups of people has been detailed by Fukuyama (1995), and Fullan's work has been seminal in this regard: "not only must moral purpose guide and drive our efforts, but moral purpose must also go beyond individual heroism to the level of system quality" (Fullan, 2005, p.xiii). Hopkins (2007) likewise promotes an avidly social justice agenda with a strong moral purpose - an approach which he acknowledges some school leaders will be unhappy talking about.

The deliberate collectivising of individual teachers' and schools' efforts for **synergistic advantage** is the second key element of system-level theory. But this notion of system leadership goes beyond collaborative activity of the sort which schools have engaged in locally and informally (Hopkins & Higham, 2007). Fullan advocates a collective commitment to better education for all through a concerted effort to "reconcile the power and action of the centre with the ideas, wisdom and engagement of the field" (Fullan, 2004, p.6). This dimension of system theory rests on three principles: (1) fostering a collective commitment between the centre, local government and schools to use their mutual influence for improvement across boundaries; (2) the wide development of networks for the lateral transfer of disciplined innovation; (3) the mobilisation of a critical mass of leaders at all levels who work both in their own organisations and for the bigger picture. In pragmatic terms, system leadership has come to be seen over the past two decades as a wider resource for school innovation and improvement; as a more authentic response to low-attaining schools than centralised initiatives are able to provide; and as a potential means to resolve the declining supply of well-qualified school leaders (Higham et al., 2009). The third of these principles is perhaps the hardest to realise in practice, as leaders may not have the capacity to take on additional work beyond their own school, an obstacle noted by both Hill (2011) and Keddie (2014) in their analyses of interviews with school leaders.

The greater degree of responsibility that system-level working carries is another factor which may deter individual schools and their leaders from making a collective commitment to improvement for all. Gilbert (2012) suggests that system leaders face four main accountability relationships: with pupils, parents and the community (a moral obligation); with

colleagues (a professional obligation); with employers, school governors and central government (a contractual obligation); and with the imperatives of customer choice (a market obligation). When working at system level, all these pressures extend beyond one's own school and may be daunting.

The most fully developed theorisation of system-level working thus far has been provided by David H. Hargreaves in a series of opinion pieces which posit a 'self-improving school system' or SISS. As other writers have done, he foresees four blocks on which a SISS could rest: clusters of schools (**the structure**); a local solutions approach, and a commitment to co-construction (**cultural elements**); and system leaders to make it happen (**key people**) (Hargreaves, 2010). The process of achieving complex collaboration which gets beyond the barrier of the local is further developed into a 'maturity model' (Hargreaves, 2011). Here he theorises the three key dimensions (each sub-divided into four strands) of **partnership competence** and **collaborative capital**, which are needed to drive the **professional development** essential to improving pupils' outcomes. He proposes the joint practice development or JPD model for the latter (which, as I noted in section 2.3 of this Chapter, other writers have also taken up) because "Teachers need sustained time in which to work together on practice development and transfer and it takes imagination to provide this" (*ibid*, p.12). It is claimed here that a high-achieving school which assists a low-achieving school will reap benefits itself, but the claim is not substantiated with evidence of what those benefits might be. In assessing the impact on pupil performance of the SISS model, Greany (2015a) notes that there is no evidence in the PISA 2012 data (OECD, 2013) of an improvement in England's results compared to international benchmarks. PISA 2015 results suggest that rankings improved marginally in science and reading, and fell marginally in mathematics, compared to 2012; the new dimension of collaborative problem solving produced a better performance than the other dimensions (OECD, 2016, 2017). It is thus difficult to argue that adopting the SISS model has achieved, as yet, the stated aim of making the English education system one of the fastest improving in the world (HM Government, 2010).

Taking a pragmatic view, Keddie (2014) suggests that system-level benefits might include reducing the isolation which the government's academy programme has brought to many schools, and a concomitant pooling of resources which might rescue small schools, especially in the primary sector, in the current climate of real-terms cuts in education spending. The fourth of Hargreaves' opinion pieces (2012) acknowledges that the opening phase of the teaching school programme has thrown up a wide variety of partnership depths and of collaborative activities, and that some attempts at complex collaboration have been disappointing to participants. This is borne out in the findings of Rea et al. (2015) who identify a number of leadership challenges to effective and sustainable between-schools

collaboration: chief among these are ownership of the work, empowering of middle leaders, uncertain or changing focus, lack of time and capacity, and other competing priorities.

As a guide to how to go about securing effective knowledge creation and transfer for staff professional development, Hargreaves offers the paradigm of 'disciplined innovation' as a method for identifying, testing, revising and implementing specific pedagogical strategies through projects shared between teachers and departments across schools. The teaching schools programme is not the first time that this has been attempted, of course: the landscape of English education is littered with experiments in collaborative improvement, trace evidence of which persists in some of today's configurations. The concept of the 'demonstration school', a high-quality provider centrally concerned with teacher education and development, is at least a century old in Britain; and the 'laboratory schools' movement in the United States was closely associated with John Dewey (1859-1952) (Matthews & Berwick, 2013). A major difference between these and teaching schools is the school-to-school support function of the latter. But this element is not new in Britain either: the Excellence in Cities programme, Education Action Zones, and the Specialist and Beacon Schools designated from 1998 all sought to improve teaching and learning by spreading effective practice between schools. Evaluations found some positive impacts at primary and Key Stage 3 levels, but in a significant number of cases there was limited or no effect at Key Stage 4 (Ofsted, 2003; Kendall et al., 2005). In contrast, a successful example of school partnership for improvement was London Challenge which ran between 2002 and 2009, and which provided the pilot for the full teaching schools initiative (Berwick, 2004); its offshoot City Challenge ran in Greater Manchester and the Black Country between 2008 and 2011 (Ainscow, 2015). Evaluations suggest that school-to-school collaboration in local areas contributed to the successes that the Challenge programmes produced, though success was not uniform across all schools and all areas (Hutchings et al., 2012; Baars et al., 2014). However, analysis of Youth Cohort Study and National Pupil Database figures by Blanden, Greaves, Gregg, Macmillan and Sibieta (2015) shows that the greater-than-average improvement in GCSE scores labelled the 'London Effect' began in the mid-1990s, before the introduction of London Challenge and the Academies programme; and that greater-than-average levels of performance in assessments are discernible in disadvantaged pupils in London from the age of 5, not only in those aged 11-16 who were targeted by London Challenge. The authors suggest that part of the explanation for improved GCSE scores may therefore be prior attainment on entering secondary school, for which London Challenge cannot take credit.

The most recent trend in school partnerships prior to the teaching schools programme has been the proliferation of federations and chains of academies. Federations may be prompted by the pairing of high- and low-achieving schools under previous programmes, and

the relationship is then formalised into a federation under an executive head or principal. Chains have come about through the compulsory conversion of schools judged as 'failing' to sponsored academy status, the sponsor being in two thirds of current cases a commercial company or other institution which groups the new academies it acquires and runs them under a common operating system (Hill, 2010; Hill, Dunford, Rea, Parish & Sandals, 2012), a model which has some resemblance to the charter school movement in the United States. These sponsored chains have been joined by voluntary, 'convertor' academies which may choose to join together in a 'multi-academy trust' or MAT (Simkins, 2015), which has become the Government's preferred model for between-schools partnership (DfE, 2016a). From the perspective of school autonomy, however, Keddie (2016) draws attention to the fears over loss of ownership, local responsiveness and trust voiced by leaders of small primary schools who felt compelled to join an academy chain.

Claims for greater effectiveness in academy chains have been made by the National College (NCSL, 2012b) and by the Department for Education (DfE, 2013). However, these claims have been challenged. A report for the Sutton Trust, an independent body which seeks equity in education, suggests that the pattern of improvement in outcomes for disadvantaged young people is not uniform within or between academy chains; perhaps crucially for policy on school partnerships, for disadvantaged pupils academy chains underperform the mainstream mean on a number of government indicators of attainment (Hutchings, Francis & De Vries, 2014). Comparative analysis of performance data for 2015 by Andrews (2016) shows significant variation both between different multi-academy trusts and between different local authorities (much greater than the variation between the two types of grouping). These findings reflect similar evaluations of the London Challenge and City Challenge programmes of the first decade of this century. Conversely, analysis by Chapman and Mujis (2014) of a range of federation types and sizes created between 2005 and 2008 (of which academy chains form only a small proportion) suggests that while there is no significant difference in pupils' outcomes between federated and non-federated schools at baseline, there is evidence of greater improvement in federated schools over time and particularly in small 'performance federations' which pair a high- and a low-performing school.

The school partnership precedents for the teaching school alliance model could therefore be said to be unclear in their implications: some successes can be detected and may be in part attributable to complex forms of collaboration between schools, but uniformly greater rates of improvement in schools linked by formal arrangements cannot be claimed. Despite this patchy evidence, a report for the Academies Commission which enquired into the overall impact of academisation argues that newly autonomous schools do need to work together to accelerate school improvement, in particular the quality of teaching and its impact on learning and the achievements of children and young people (Academies Commission,

2013). This position identifies some of the features which distinguish teaching school alliances from their predecessors: collaboration as independent entities working together rather than being formally affiliated or absorbed into a greater whole; a focus on improving the quality of teaching as the chief driver of improvement; and a national scope to the programme, unlike earlier locally- or regionally-bounded partnership experiments.

The question remains of how to transfer knowledge effectively between individuals and between schools which choose to work together in search of collaborative advantage. How indeed could such transfer be observed and measured? The analytical framework that I propose to use for this purpose is Rogers' (2003) diffusion of innovations theory, which I examine in the following section of this Chapter.

2.7   Diffusion of innovations

Whether knowledge is transferred directly in a top-down direction or is developed collaboratively and laterally, it is commonly agreed that the key aspect of the spreading of effective practice that is crucial to system-level improvement is the moving of knowledge between one person and another. A highly influential model of the movement of knowledge which has been deployed in several fields (chiefly in public health, marketing, sociology, and communications science) is the diffusion of innovations theory developed over the course of forty years by Everett Rogers (2003).

2.7.1   Elements of the innovation diffusion model

The knowledge that is moved from one person to another can be conceptualised as an 'innovation', and can take the form of an idea, practice or artefact that is perceived as new by an individual or other unit of adoption. The process of adopting an innovation can be thought of as 'diffusion', a concept which uses social networks to explain the spread of ideas and which recognises that people do not always make an objective evaluation of the utility or desirability of an innovation, but are often influenced subjectively by other individuals who have already chosen to adopt or not to adopt the innovation. This personal influence is indeed seen to be a more significant factor in rates of adoption and non-adoption than is public or official promotion of an innovation. The usefulness of this insight for my study of classroom staff's professional development in a teaching school alliance is that the top-down, transmission strategy for knowledge transfer is shown by diffusion theory to be relatively ineffective because individuals tend to make their choices based on criteria other than official policy.

The diffusion model is theorised by Rogers (2003) as consisting of four main elements:

- **the innovation** itself – an idea, practice or artefact;
- **communication channels** through which knowledge of the innovation is passed;
- **time** – people adopt at different stages of an innovation's life-span, a few 'innovators' very early, the majority at some middle point, and a few 'laggards' very late;
- **a social system** within which the innovation diffuses at both a formal, patterned level and at an informal, interpersonal level. The influence of opinion leaders and change agents may be detected in a social system.

The 'innovation-decision process' by which diffusion takes place is suggested by Rogers to have five stages through which all potential adopters pass in sequence. This sequence is shown below in Figure 2.2, where the individual adopter enters the decision process at the top of the diagram and passes downwards from one stage to the next:

Prior conditions:
Previous practice
Felt needs / problems
Innovativeness of indiv
Norms of social system

I. **KNOWLEDGE**
of the innovation

Characteristics of decision-making unit:
Socio-economic
Personality variables
Communication behaviour

II. **PERSUASION**
Individual forms favourable
or unfavourable attitude

Perceived characteristics of innovation:
Relative advantage
Compatibility
Complexity
Trialability
Observability

III. **DECISION**

Adoption   Rejection

IV. **IMPLEMENTATION**

V. **CONFIRMATION**

Continued adoption
Later adoption
Discontinuance
Continued rejection

Figure 2.2:   The diffusion of innovations   (after Rogers, 2003)

The diagram shown above theorises the innovation-adoption decision process as consisting of five sequential stages, beginning at the top of the diagram. The box to the left of *Stage I – Knowledge*, connected to it by a solid line, shows that personal and contextual conditions prior to the decision process are very likely to influence the process outcome. Similarly, the box to the right of *Stage I – Knowledge*, connected to it by a dotted line, shows that characteristics of the person or organisation making the decision (the 'decision-making unit') are somewhat likely to influence the process outcome. The box to the right of *Stage II – Persuasion,* connected to it by a dotted line, shows that what the adopter perceives about the innovation itself is somewhat likely to influence the process outcome. This is a generalised model which needs to be adapted to the specific conditions found in a particular field of enquiry. I discuss the application of the model to my own research in section 2.7.2 following this section.

Rates of adoption of an innovation are the second key element of this model, and are commonly measured as numbers of adopters over time. These data can be represented as

curves on a graph, as shown below in Figure 2.3. The blue curve shows the rate of adoption
by successive groups in the population (on the horizontal axis), while the yellow curve shows
total number of adopters or 'market share' (on the vertical axis). It can be seen that the
idealised model of adoption follows a normal distribution, although this is unlikely to be
observed in reality in any particular situation.
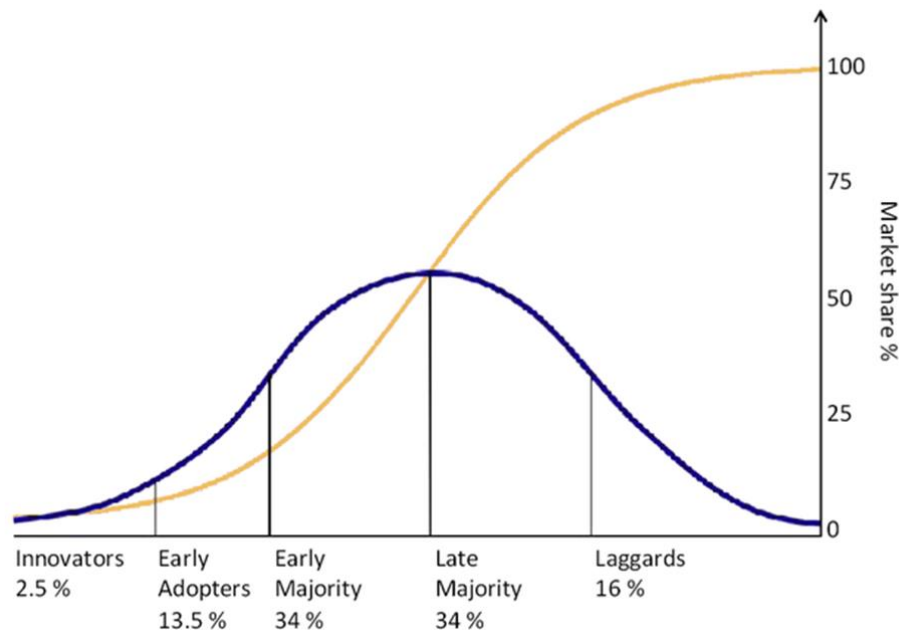
Figure 2.3:   Rates of innovation adoption over time (after Rogers, 2003)

As this diagram shows, Rogers (2003) divides the population of adopters into five categories
depending on the time at which they adopt the innovation. The timing of adoption is
determined by an individual's *innovativeness*. He labels these categories of adopter as
follows:

- **innovators** – they are 'venturesome', and their interest in new ideas leads them out
  of a local circle of peer networks and into more cosmopolite social relationships;
- **early adopters** – they are more localite than the innovators, have the highest degree
  of opinion leadership through interpersonal networks, and put their seal of approval
  on an innovation by adopting it;
- **early majority** – they interact frequently with their peers but seldom hold positions of
  opinion leadership in a system, and may deliberate for some time before adoption;

- **late majority** – they are sceptical, so that the weight of system norms must favour an innovation before they are convinced to adopt it;
- **laggards** – the most localite of all categories with almost no opinion leadership, they are extremely cautious about adoption for reasons that they consider rational.

These categories are important because 'change agents' (who aim to introduce and embed change in the population) need to identify and recruit the most influential category, the 'early adopters', in order to achieve take-off for the innovation. If early adopters do not lead opinion in favour of adoption, then the innovation is unlikely to be adopted subsequently by other categories in the population. It follows that a key task for leaders of collaborative working between schools would be to identify and recruit people who are capable of influencing their colleagues to take up the innovation.

I propose using these elements of the diffusion of innovations model as a framework to help explain my findings regarding the ways in which the teaching school alliance innovation spreads or does not spread among my sample population. In the next section, I apply the diffusion model to my own research.

2.7.2   <u>Applying the diffusion of innovations model to my research</u>

To establish an analytical framework of innovation diffusion that is relevant to my research, I have mapped the characteristics of my subject Alliance onto the elements of Rogers' diffusion model as follows:

- **the innovation**: the pedagogical ideas, practices and artefacts which are transferred between classroom staff who work in Alliance member schools – for the purposes of my research, I define the innovation that is the subject of my research as *'participation in Alliance-generated professional development activities'*;
- **communication channels**: the means by which innovations are transferred, which may include formal training courses of several sessions, held outside the bounds of the school; one-off CPD meetings for teachers of one or more schools; informal contact between teachers of one or more schools; electronic communication channels such as websites and blogs, online training courses, and social media sites; and other, emerging channels which I have not included in this list;
- **time**: the subject alliance began functioning in September 2013 and had an initial designation period of four years. I observed its operations over the first three years of its life-span, a longitudinal view which is not usually available to researchers who

explore diffusion after the event - this point of view allowed me to follow the innovation-diffusion process as it happened, rather than only in retrospect;

- **social system**: the classroom staff who work in member schools have both formal and informal links within and beyond their own schools, a complex and varying network in each individual's case – the data that I collected on personal contacts could help to explain their influence on individual innovation adoption decisions.

I used these elements of Rogers' model as a tool to help me analyse the change processes that I observed in my subject Alliance. But because the model was originally designed for use in fields other than education, there are some limitations to its application to my research. I discuss these limitations in the next section.

2.7.3   Limitations of the innovation diffusion model in educational research

There are some potential limitations of the innovation diffusion model with regard to the education field which I needed to take into account when analysing the diffusion of the teaching school alliance innovation through my sample population.

Rogers' model has been used in tracking the implementation of school improvement innovations by Hannon (2011), but others have warned that the model's focus on very early-adopting 'innovators' can lead to the over-emphasis of initial success (Cerna, 2013). Further, earlier criticism of the diffusion model noted that attempts to pigeonhole an individual into an adoption category are misguided because one person may respond to different innovations in different ways at different times (Downs & Mohr, 1976; Brown, 1981). Nor does the classic model's focus on individual response to a single innovation account for the factors in play at organisational or system level, which may work against adoption by individuals for reasons of cultural compatibility or accessibility (Sapp, 2014).

Rogers' diffusion model typically takes the individual person as the **unit of adoption**, and this has also been the main focus of the many subsequent diffusion studies carried out in the fields of public health, marketing, communications and sociology. Rogers notes that as of 2003, over 5,200 diffusion studies have been conducted since the pioneering study of hybrid seed corn diffusion in Iowa by Ryan and Gross (1943). This standpoint privileges autonomous decision-making by individual members of a social system and assumes that, subject to the sources of influence that the model recognises, every individual has free choice in the innovation adoption-decision process. In a typology of adoption decisions, Rogers calls this type 'optional'. But this approach does not sit well with the goals of system-level improvement, which stresses the synergistic benefits of collective moral purpose and

collaborative advantage. Indeed, much less work has been done on the diffusion of innovations at the level of organisations, where power and hierarchy might have more influence than personal social networks in which members are largely equal in status if not in knowledge. Rogers devotes one chapter of eleven to innovation in organisations, where he gives precedence to leader characteristics and structural matters (such as centralisation, complexity, interconnectedness, and openness to external influences) in measuring an organisation's innovativeness. There is nothing in this account to explain the importance of an organisation's members, treated as voluntarily collaborating individuals, to the success or failure of innovations which are introduced by the organisation's leaders. Indeed, Rogers focuses on the necessity of an 'innovation champion' to the successful adoption of an innovation in an organisation, which runs counter to the distributed perspective on leadership which the theories of system-level improvement that I have discussed in this Chapter seem to take. I therefore needed to look closely at the interplay between Alliance-level, school-level and individual-level influences on the adoption decision process.

A powerful synthesis of innovation diffusion models which adopts a multi-level perspective is offered by Wejnert (2002). She integrates the array of variables identified in diffusion research into three major components on different levels:

- characteristics of the **innovation** itself (public v private consequences, benefits v costs);
- characteristics of **adopters** that influence adoption (social and economic considerations, familiarity with innovation, personal qualities);
- characteristics of environmental **context** that modulate diffusion (geographical settings, societal culture, micro-political considerations, uniformity).

This integrated model seemed to offer a useful analytical framework for my research because it gives equal weight to all three levels, unlike Rogers' approach which focuses primarily on the individual adopter. I could thus answer the concerns discussed in this section by taking Wejnert's multi-level approach to innovation diffusion when analysing my empirical data. The use of levels in analysing my data is discussed further in relation to Bronfenbrenner's (1979, 1989) ecological systems model of development in section 2.8 of this Chapter.

In addition to specific limitations regarding its applicability to educational research, there are further, more general limitations of innovation diffusion research which I discuss in the next section.

2.7.4   General limitations of the innovation diffusion model

Further criticisms of diffusion research noted by Rogers, and based on the work of a wide range of scholars, mean that the theory must be employed with a critical stance. He notes firstly **'pro-innovation bias'** which is the implication in diffusion research that an innovation should be diffused and adopted by all members of a social system. Reasons for this bias are that much diffusion research is funded by change agencies which have a bias towards innovation themselves (just as my research was funded by the teaching school alliance that I was studying); and that adoption of an innovation leaves a traceable path of *post hoc* evidence whereas rejection or discontinuance does not. To counter this implicit assumption that an innovation should be adopted, Rogers suggests that the diffusion process should be studied while it is under way so that rejection can be detected just as readily as adoption. My research design did indeed take this approach because it was longitudinal in form. Both successful and unsuccessful innovations need to be studied, and rational decisions for rejection, discontinuance or re-invention should be acknowledged. I did this through my overtly declared position that I did not necessarily expect the teaching school alliance innovation to succeed, but was interested in how it was viewed by potential adopters. This perspective helped me to meet Rogers' demand that diffusion researchers ask 'why' questions about adoption. As this literature review shows, I was also interested in the last of Rogers' concerns about pro-innovation bias, that the researcher should consider the policy decisions that led to an innovation being introduced to members of a social system.

A second criticism of diffusion research noted by Rogers is **'individual-blame bias'** which is the assumption that an individual person is responsible for his or her problems (and thus for adoption decisions) rather than the system of which the individual is a part. This is suggested to arise from a failure to see the innovation from the audience's or recipient's point of view, instead taking the change agency's point of view which may rest on the assumption that the system is not at fault. *Blame* is a matter of opinion or interpretation, whereas the *cause* of an innovation adoption decision can be theoretically or empirically ascertained: researchers should focus on the latter as far as possible. It is also the case that the 'social science' diffusion paradigm drives researchers towards surveying individual adopters who are easily accessible, and they are thus channelled into an individual-blame definition of diffusion problems. The 'anthropological' diffusion research tradition, which usually conducts qualitative ethnographic research rather than using quantitative survey data, tends to point to system-blame aspects of diffusion problems. My research sought to counter 'individual-blame bias' by taking a mixed-methods approach which used both quantitative survey data and qualitative interview data to ascertain *why* an individual made his or her innovation adoption decision. I present my mixed-methods research design in detail in Chapter Three of this thesis. I also looked at system characteristics as well as individual ones because that

was indeed one of the focuses of my research: the teaching school initiative is designed for system-level improvement across schools through individuals' professional development.

A third criticism of diffusion research noted by Rogers is **'the recall problem'** which identifies a key weakness of the paradigm in depending on self-reported recall data by respondents, usually via a one-shot survey. I mitigated this problem, if not entirely erased it, by adopting a longitudinal research design which provided the 'moving picture' of behaviour which Rogers identifies as necessary to tracing the sequential flow of an innovation as it spreads through a social system. Also, by using interviews to investigate the reasons for respondents' decisions, I could check the validity of survey data about degrees and rates of adoption, although it was not possible to interview every survey respondent due to limitations of time and manpower.

Rogers' fourth criticism of diffusion research is **'the issue of equality'** in that people who adopt an innovation may receive socio-economic advantage compared to those who do not, particularly in developing economies. I felt that this was less of an issue in a professional setting in a developed country, where socio-economic status is already relatively high and evenly spread, than it might be in a less-developed economy. However, I was alert to both perceived and actual advantages gained through adoption of innovations in the teaching school alliance: school leaders' perceptions about teachers' fitness for promotion or reward, for example, could influence adoption decisions.

I recognised these potential criticisms of diffusion research and was careful to counter the assumptions and biases that are suggested may afflict the diffusion researcher. I was confident that the diffusion model, particularly the multi-level variant developed by Wejnert (2002), offered a strongly-evidenced and sophisticated analytical framework for my own research, even though it is relatively rarely used in education studies.

2.8   Ecological systems model of human development

The integrated approach to the diffusion of innovations taken by Wejnert (2002), which I discussed in section 2.7.3 above, acknowledges the importance of seeing the adoption process as operating on several inter-connected levels. This is also the approach taken by Bronfenbrenner (1979, 1989) in his 'ecological paradigm' of human development, originating in the field of developmental psychology and stemming from his work with children.

2.8.1   Elements of ecological systems theory

In summary, Bronfenbrenner builds on Lewin's (1951) classic field theory of behaviour to argue that human development cannot be divorced from environmental context. Development takes place over time through processes of progressively more complex interaction between people and their immediate and more remote environments. These interactions can be represented as an active system consisting of a series of nested levels which work dynamically together, as shown in Figure 2.4 below. The individual's most immediate environment, that of family and other very close social connections, is labelled the 'micro-system'. Further levels, which grow progressively more remote from the individual but which nonetheless have an influence on his or her development, are labelled 'meso-system' (providing the linkages between different micro-system settings such as family and school), 'exo-system' (settings with less direct influence on individual), and 'macro-system' (overarching cultural influences):
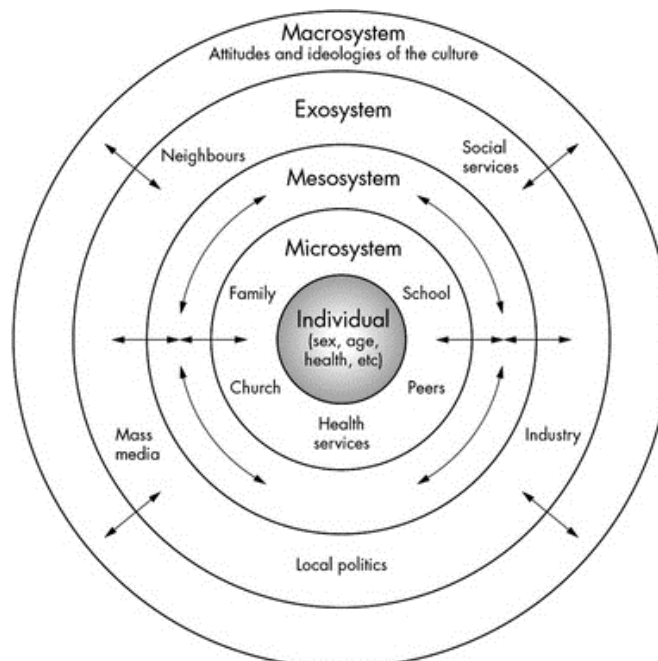
Figure 2.4:   Model of ecological system of human development (after Bronfenbrenner, 1979, 1989)

The diagram above shows the interplay of various influences on an individual's development in an active system of interconnected levels of context. Given the variety of influences on an individual's decision whether to adopt or not to adopt an innovation, I argue that it is useful to my research to combine Wejnert's (2002) multi-level perspective on innovation diffusion with Bronfenbrenner's (1979, 1989) ecological perspective on development. I therefore employed a multi-level perspective in my analytical framework, where I analysed the attitudes reported by individuals as influencing their innovation adoption decisions in the following three dimensions as conceptualised by Wejnert (2002):

- *micro-level*:   attitudes to own professional development (the **adopter** dimension where the characteristics of an individual influence the probability of adoption of an innovation;
- *meso-level*:   attitudes to change as experienced in one's workplace (the dimension of environmental **context** that modulates diffusion via characteristics of the actors' external settings);
- *macro-level*:   attitudes to collaboration between staff and between schools, as the teaching school alliance model proposes (the dimension where characteristics of the **innovation** itself influence the adoption process).

The application of the ecological systems model to the field of education is not without its limitations, however. I discuss these limitations in the next section.

2.8.2   Limitations of ecological systems theory

While the multi-level design of the classic ecological systems model has been adopted in a wide range of fields, it has been suggested (Darling, 2007) that Bronfenbrenner's later iterations of the theory emphasise the **importance of the person** at the centre of the model's concentric rings, rather than focusing on the environment (Bronfenbrenner & Ceci, 1994; Bronfenbrenner & Morris, 1998). It follows from this argument that researchers cannot assume that a particular environmental configuration will produce an identical response in a number of different individuals, even if the individuals share similar characteristics. For the purposes of my research, this meant that I had to treat my case as unique in contextual terms: I could not generalise with confidence from my sample population in one school to other schools, or from my subject Alliance to other teaching school alliances. The value of ecological systems theory is that it conceptualises the influence of contexts on individual development: contexts are important in understanding how people learn, but are at the same time unique in their impact on each person.

A criticism made of ecological systems theory specifically in relation to education is that the classic model gives no place to the concept of **resilience** in individuals (Christensen, 2016). Understood as the capacity to overcome obstacles through positive thinking, goal orientation, self-motivation and persistence, resilience can explain why some people deal with barriers to learning by focusing on what works and moving forward positively, rather than reacting negatively to what does not work (Benard, 1993, 2004; Beltman, Mansfield & Price, 2011). Without this factor, ecological systems theory has no way of explaining how an individual living or working in a negative environment survives and becomes successful. This gap is significant to my use of the theory because an individual's response to the teaching school alliance innovation could be positive, despite a generally negative environment. An innovation adoption decision may run counter to prevailing contextual factors if the individual sees something positive in the innovation, and is sufficiently resilient to adopt it in the face of resistance to adoption in the social groups (or communities of practice) to which he or she belongs.

In the final section of this Chapter, I summarise the key concepts relevant to my research that I derived from the literature of change and of collaboration; and from the theories of innovation diffusion and of ecological systems that I used to build my analytical framework for deriving findings from my empirical data (which I present in detail in Chapter Four of this thesis).

2.9   Summary of key concepts

In this section, I summarise the key concepts that I developed through reviewing the literature and which I have employed in seeking answers to my research questions:

- **Change in organisations**   under the influence of external and internal pressures, discontinuing previous ways of working, pursuing innovations and reframing organisational identity, so as to create a new dimension of performance (Drucker, 1985; Bridges, 2003; Schein, 2004; Kotter, 2013; Hayes, 2014)

- **Change in educational settings**   altering how work is done in schools in order to improve staff and pupil performance (Fullan, 2001a; Leithwood & Riehl, 2003; Leithwood, Day, Sammons, Hopkins & Harris, 2007)

- **Professional development**   activities that develop an individual's skills, knowledge, expertise and other characteristics so that both teacher and pupil performance are improved (OECD, 2009; Bubb & Earley, 2007; Timperley, 2008, 2011; Stoll, 2015).

- **Collaboration**   working to achieve a common goal both within and beyond one's own school with others who have varied opinions and backgrounds (Stoll, Bolam, McMahon, Wallace & Thomas, 2006; Hargreaves, 2010, 2011)

- **Self-improving school system**   an approach to school improvement whereby responsibility is moved from both central and local government and their agencies to schools, which work collaboratively for improvement for all (Hargreaves, 2010, 2011)

- **Teaching school**   a school that works with others in an alliance to lead the system by providing high-quality training and development to new and experienced school staff (NCSL, 2011a, 2012b; Matthews & Berwick, 2013; Husbands, 2015)

- **The innovation that is the subject of my research**   participation by serving classroom staff in Alliance-generated professional development activities

- **Diffusion of innovations**   knowledge, in the form of an idea, practice or artefact that is perceived as new, is moved from one person to another in a process influenced by characteristics of the adopters, of their environmental context, and of the innovation itself (Rogers, 2003; Wejnert, 2002)

- **Ecology of change**   development takes place over time through processes of interaction between people and their immediate and more remote environments, which are represented as 'systems' at various nested levels (Bronfenbrenner, 1979, 1989; Bronfenbrenner & Morris, 1998)

These key concepts form the overarching conceptual framework for my investigation of the influence of a teaching school alliance on the professional development of serving classroom staff. In Chapter Three which follows, I present my research design for this investigation, and discuss the approach I took to collecting and analysing the empirical data that I needed to help answer my research questions.

Chapter Three

Research Design

In this Chapter, I present my research design and discuss the approaches I took to collecting and analysing my data. Because the teaching schools policy was new to my respondents and to me, I took a pragmatic stance in my attempt to understand what meanings my respondents were making of the policy as embodied in the work of my subject Alliance. I did not know what I would find, so my epistemology needed to be subjectivist and my research approach inductive. I explain in the following section how I developed my research design in the light of these choices.

3.1   Perspective and approach

My epistemological position as a researching professional in education is **interpretivist** because I make the assumption that people generally behave according to their own blend of desires, motivations, biases and goals (Wilt & Revelle, 2015; Locke & Latham, 1990), and that they therefore make decisions which are intuitive rather than rational (Kahneman, Slovic & Tversky, 1982; Kahneman, 2003). My assumption is underpinned by a constructivist ontology whereby I recognise the concept of the 'social construction' of reality (Berger & Luckmann, 1966; Vera, 2016). I take this concept to draw attention to what people conceive to be real and what is taken for granted while conducting everyday life; these definitions of what is real are legitimated and maintained by social mechanisms. This position chimes with my own experience as a student and teacher of literary fiction: in literary studies, both the writing of texts by authors and the interpretation of texts by readers are taken to be culturally and historically situated, and cannot be value-free (Eagleton, 1996; Nystrand, Greene & Wiemelt, 1993; Rosenblatt, 1982). Thus, applied to the circumstances of my research study, I assume that drivers of individuals' behaviour are likely to be a key element in understanding how and why members of an organisation might respond to a policy initiative introduced by system and organisation leaders.

My research questions stemmed from a desire to understand what influence the teaching school alliance model – the policy initiative – might have on the professional development of classroom teaching staff. My focus was thus on the responses made by individual teachers

and non-QTS teaching assistants at classroom level to the practical implications of the teaching school alliance policy. This goal drew me towards an **inductive perspective** (Bryman, 2012; Cresswell, 2014; Thomas, 2003) because I wanted to see the process from the participants' points of view: what was it that led individuals to adopt or not to adopt the innovation of participating in Alliance-generated professional development activities? As a result of choosing this paradigm, my study could generate theory (Punch, 1998) about the influence of a teaching school alliance on professional development.

Because the teaching school model is a new and emerging entity which depends on social mediation for its effects – because it requires teachers to communicate with each other – I needed to work within the **constructivist paradigm** in order to understand what sense teachers were making of the Alliance as they met it and worked together through it, and then to develop an emergent theory (Eisenhardt & Graebner, 2007; Eisenhardt, 1989) from the evidence that I gathered. I was not intending to import existing theory and test it on my subjects, although I argue that using diffusion of innovations theory as a conceptual model could help me to track the innovation-decision process in the cases that I investigated.

Adopting an interpretive paradigm allowed me to be flexible in my research design so as to cope with both expected and unexpected data. I anticipated finding a range of views among respondents to the innovation represented by the teaching school alliance project (Bushey & Kamphuis, 1993; Goepel, Hölzle & zu Knyphausen-Aufseß, 2012). For example, some respondents might be sceptical about the teaching schools model itself and thus take an uncooperative or avoidance approach to the alliance's activities, though they might not wish to reveal this to a researcher. Others might be enthusiastic about the principle of collaboration and thus take deliberate actions to pursue professional development beyond their own schools walls; such respondents might seek to promote the Alliance's work in their answers to my questions. Lying between these possible responses, I might find uncommitted respondents who saw the teaching schools policy as just another education initiative which had nothing special to recommend itself to their particular situations. Such people might choose a path of strategic compliance in the expectation that the initiative would fade away in time; they might express guarded acceptance of the initiative but their words might not match their actions. It was also possible that an individual's perspective could change over time and thus that his or her beliefs and actions regarding the Alliance might differ between observation points. I needed to be alive to all these potential points of view and to be ready to capture them in order to inform the rich, 'thick' picture of the case (Geertz, 1975) that I planned to gain.

The fact that I was myself a teacher in the school which led the Alliance meant that my research approach would inevitably be conditioned by my professional role. I was socially 'situated' (Denzin & Lincoln, 2000) and also 'situated' in terms of the learning that I was

undertaking (Costley, Elliott & Gibbs, 2010): what I could learn about the social system that I was studying might be determined by my own place in that system, in ways both advantageous (such as access to it and detailed understanding of it) and disadvantageous (such as issues of power, or a lack of critical distance due to my professional status in the system, or an unconscious bias at a personal level) (Drake with Heath, 2011). The inductive perspective and the constructivist paradigm that I selected for my research might be argued to be inherent elements of the 'insider researcher' position that I had inevitably to adopt as a researching professional because it was not possible to be a fully 'objective' observer of something that I was part of. This was not a handicap, however, because being 'objective' is not the same as being thorough and balanced (Thomas, 2009). As long as I rigorously identified and acknowledged my own beliefs and biases, expectations and assumptions, then I would be able to form a thorough and balanced picture of what the participants in my study revealed about their perceptions of the influence of the Alliance on their professional lives. The topic of teaching schools as an instance of educational reform is, of course, value-laden in both political and practice terms: thus, remaining value-free was, in my view, an unrealistic expectation for this study (Guba & Lincoln, 1989). But I needed to be aware of and to account for the values that influenced my investigation. The critical self-awareness of a properly reflexive stance is indeed a key element of insider research, that is, "placing oneself squarely in the frame of the research and considering explicitly what that means for the project provides a degree of integrity and authenticity" (Drake with Heath, 2011, pp.35-36).

In the highly complex field of human interaction, the presence of the researcher might influence what he or she sees, either by altering the behaviour of those who know that they are being observed, or by skewing what the researcher makes of what is seen because he or she forms part of the evidence. There are thus inter-related problems of securing 'objectivity', 'reality' and 'truth' in any social research which neither a relativist nor a positivist approach on its own can solve (Pring, 2000). I aimed to mitigate these problems by paying attention to the middle way, lying between 'naïve realism' on the one hand and 'experimental positivism' on the other, which has been proposed in the **critical realist** philosophy of Roy Bhaskar (Collier, 1994). In taking this path, the researcher is aware of the constructed nature of knowledge but does not surrender wholly to treating his or her own practice as unique and subjective – it is assumed that there is a more or less reliable foundation of what is generally accepted as known, on which each researcher builds afresh. Thus, although the teaching schools project was emerging, and classroom staff in the member schools of my subject Alliance were faced with possibly unfamiliar individual and group demands as they engaged with the Alliance, it seemed to me to be likely that their experiences would echo to some extent the experiences of others who encountered similar innovations in similar circumstances. This is why using the well-established conceptual framework of innovation diffusion theory was helpful in understanding my respondents' attitudes and actions. I thus

decided to take an empirical, descriptive approach to collecting and analysing data about the innovation-decision process in relation to the Alliance.

Because my aim was to map actual behaviour as it emerged, the case study seemed to be an appropriate research strategy, and I shall next consider the merits and limitations of the case study frame.

3.2   Research strategy

The **case study frame** is the research strategy most commonly used in innovation diffusion studies of the sort that I proposed for my project (Rogers, 2003). The case study has the advantage of placing a focus on particular instances in real-life contexts, usually with the aim of understanding the participants' experiences. The 'case' is specific to the subjects: it is 'their' situation which is being investigated and it has to be approached as a reality which the participants define (Pring, 2000). A high degree of detail is implicit in the approach: "A case study is expected to catch the complexity of a single case. A single leaf, even a single toothpick, has unique complexities" (Stake, 1995, p.ix). There is also a significant element of the exploratory which makes it suitable for pursuing empirical evidence (Bell, 2005). This aspect of the case study suited my project well because I intended to explore a sample of several bounded systems nested inside a larger bounded system (member schools of a single teaching school alliance) and to describe what I observed. As I was a part-time, solo researcher with limited time and resources available, the tight focus of the case study was also appropriate.

While the case study design frame seemed the most suitable of the various options both for answering my research questions, and in being do-able in my particular circumstances, I was aware of the **limitations** of the case study as suggested by various critics. A single case may be subject to selective reporting and consequent distortion; and generalisability is a major concern where the individual case is not sufficiently similar to others of its type (Denscombe, 1998). This objection may affect the knowledge that my research could contribute, although I was hopeful that some or all of the explanatory factors that I might uncover in my study would be relevant to other, similar teaching school alliances (an eventual total of 600 teaching schools is planned by the National College). Indeed I might be able to go some way towards answering Hargreaves' (1996) and Goldacre's (2013) criticisms of case studies in education: that they rarely produce knowledge of the sort that is needed; that what they do produce is neither cumulative nor tests theory; and that they are one-off and small-scale. My research took a collective case study approach (Stake, 2000), both comparative of different cases and also longitudinal in design, because I aimed to trace the spread of innovations over time through a sample of several schools. A collective case study

could indeed be viewed as a 'replication study' because it uses the same methods and the same sources of evidence with different groups at different times (Camburn & Han, 2017; Lindsay & Ehrenberg, 1993). The knowledge that my work could produce would be more broadly based than has usually been achievable in single-school studies, and would thus allow more robust theorisation from the findings derived from my several sources of evidence.

Following Yin (2009), Robson (2011) defines case study as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence" (p.136). Therefore, planning requires a clear vision of phenomenon, case, focus, and unit of analysis (Gall, Gall & Borg, 2007). Some case study researchers treat the case and unit of analysis as equivalent (Grunbaum, 2007), but I follow Grunbaum's typology in separating these elements in Table 3.1 below:

Table 3.1: Elements of a case study

Element	Definition (Gall et al., 2007)	Application in this study
Phenomenon	"process, event, person, or other item of interest to the researcher" (p.447)	Classroom staff's professional development in a collaborative setting
Case (collective)	"a particular instance of the phenomenon" (p.447)	Sample schools in one teaching school alliance
Focus	"the aspect, or aspects, of the case on which data collection and analysis will concentrate" (p.448)	Participation by serving classroom staff in Alliance-generated professional development activities ('the innovation')
Unit of analysis	"the aspect of the phenomenon that will be studied across one or more cases" (p.448)	Factors affecting diffusion of the innovation in sample schools

Table 3.1 above shows the levels of analysis which a case study researcher needs to consider. Grunbaum explains why conceptual distinction of this sort is helpful:

> The unit of analysis is identical with the knowledge that key informants can provide the researcher with. … After the collection of information the data analysis aims to facilitate a knowledge transformation. ... Hence the researcher needs to understand the case layers (i.e. the case) to be able to create a valuable knowledge transformation that is authentic and transferable (if that is a research goal). (Grunbaum, 2007, pp.88-89)

This research strategy is suitable for illuminating the influence of contextual factors in a particular situation (Robson, 2011), in my research the particular situations of each of the sample schools. I do not present my cases as typical or as exemplars. But by understanding how my sample cases were nested inside their wider setting of the Alliance, and further nested inside the phenomenon of system-wide improvement, I aimed to produce practice-oriented knowledge concerning the influence of the teaching schools project on the professional development of classroom staff in my collective case setting.

I detail the characteristics of my collective case in the next section.

3.3 The collective case

I studied a large teaching school alliance in Eastern England, designated by the National College in Cohort 3 in early 2013, which formally commenced activities later the same year. Like most other teaching school alliances, the subject Alliance is composed of a single 'lead school' which has responsibility for leading key aspects of collaborative work between its 26 member schools and colleges. Three university-level institutions act as 'strategic partners' and contribute chiefly to the Initial Teacher Training (ITT) strand of Alliance activity. Governance and strategic leadership is vested in the Steering Group, consisting of Headteachers of some member schools and colleges, a governor from the lead school and the Alliance Facilitator. Day-to-day management of the 'Big 6' strands of alliance activity is carried out by the Operational Management Group (OMG) led by the Alliance Facilitator who co-ordinates the work of the strand leaders. Personnel have in all cases been drawn from member schools and colleges, and they continue in their normal school-level roles as well as taking on a system-level role.

The member schools and colleges of the Alliance are located chiefly in the two large towns in the local area; there are relatively few members in small market and coastal towns and villages. Most (17 of 26) are secondary phase schools, either 11-16 or 11-18, and nearly all are comprehensive in intake. Five special schools and the local Children's Support Service (formerly the Pupil Referral Unit) are members, as is a Sixth Form College and a Further

Education College. Nearly every secondary school in the Alliance is an academy, either sponsored or converted. Eight secondary schools belong to a local, collaborative multi-school improvement group formed a few years earlier. Nearly all the secondary schools contribute to one of the two school-centred initial teacher training (SCITT) programmes which have run in the local area for over a decade. The total number of pupils registered in the seventeen secondary schools of the Teaching School Alliance in the academic year 2014-2015 was 18,345; the total number of teachers in these schools was 1,303 and the total number of teaching assistants was 392. In the five special schools in the Alliance, the total numbers were: pupils 656; teachers 100; teaching assistants 173 (source: DfE School Performance Tables at www.education.gov.uk).

The whole of the Alliance is too large to study within the constraints I faced as a solo, part-time researcher, so I selected a purposive sample of eight schools, which I arranged into four pairs for possible comparative analysis. I identified shared demographic characteristics among the schools as the basis for their pairing: location (town or rural), age range (to 16 without a sixth form, or to 18 with a sixth form), and type (mainstream or special). Within each pair, I selected a relatively larger and a relatively smaller school so as to permit another layer of comparison. Each of the sample schools is a case in itself and the whole sample of eight schools forms my collective case. Details of the sample schools under their pseudonyms are given in Table 3.2 below:

Table 3.2: Collective case sample of schools in Teaching School Alliance

School pseudonym	Category	Pupils	Teachers	TAs	Total staff
Albuhera High School	11-18 +sixth form	1537	103	35	**138**
Charleston High School	11-18 +sixth form	873	56	3	**59**
Dettingen School	3-19 special	119	17	67	**84**
Gallipoli School	3-19 special	114	22	71	**93**
Lucknow High School	11-16 rural	764	53	10	**63**
Minden High School	11-18 rural	1015	69	14	**83**
Normandy High School	11-16 town	1161	93	29	**122**
St Lucia High School	11-16 town	745	58	28	**86**
Sample total		**6328**	**471**	**257**	**728**
Whole Alliance total		*19001*	*1403*	*565*	*1968*

(source: DfE School Performance Tables 2014-15 at www.education.gov.uk)

Table 3.2 above shows the schools that comprised my sample under their pseudonyms. The collective case sample represents approximately 37% of the total number of classroom staff who work in schools belonging to the Alliance. I judged that this was sufficient to allow me to make inferences about the attitudes likely to be found in schools in the Alliance as a whole (Baker & Edwards, 2012). The selection of sample schools by four different categories meant that the sample was likely to be sufficiently diverse for differences in attitudes among the sample population to be revealed. Characteristics of the respondents in each iteration's sample are given in Chapter Four in the relevant section discussing that iteration's findings.

Gathering data from my collective case sample over an extended period of time formed the backbone of my research strategy. I shall next discuss the selection of appropriate methods for a multiple-case innovation diffusion study.

3.4   Selection of methods

The diffusion of innovations paradigm is a communication theory which has laid the groundwork for behaviour change models across the social sciences (Valente & Rogers, 1995). The core elements of the paradigm are: (1) the innovation-decision process, including the sequential stages of awareness, trial and adoption; (2) the roles of information sources and channels about the innovation; (3) the S-shaped rate of adoption curve; and (4) the personal, social and economic characteristics of various adopter categories. Diffusion studies, which are mostly retrospective but can take place over time as an innovation spreads, have used face-to-face or telephone **interviews** where the sample population is relatively small, or **questionnaires** for a relatively large sample (Rogers, 2003). There are many classic examples of diffusion study by retrospective survey, the pioneers of which are Ryan and Gross's (1943) investigation of hybrid seed corn in Iowa, and, in education studies, work by Columbia University's Teachers College (e.g. Mort, 1953, 1957) and by the Rand Corporation (e.g. Berman & McLaughlin, 1974.) My investigation, which looked at the spread of an innovation over time, fell under the diffusion study paradigm, so the classic survey instruments of questionnaire and interview were likely to be useful to me. It must be noted, however, that surveys of the type commonly used in diffusion studies could be seen as positivistic in that they seek to collect specific data relating to the adoption process of a particular innovation. The researcher must take steps to ensure that respondents' subjective views and opinions can be expressed and collected.

Two other survey methods mentioned by Rogers could also be applicable to my project. A diffusion study conducted over time to a longitudinal design may employ **field experiment**,

meaning that a researcher plans one or more interventions, the impact of which is then analysed by follow-up surveys, as for example in the Taichung family planning study by Freedman and Takeshita (1969). Because my project had an instrumental or practice dimension – as a researching professional one of my aims was to suggest to school leaders and classroom staff ways of exploiting the teaching school model for the purpose of enhancing teacher effectiveness – what I discovered about factors affecting the diffusion of the innovation could be fed back into the Alliance's subsequent work with the aim of changing the adoption outcome of the innovation in the future.

The second additional survey method that Rogers notes, the **panel study**, has been used in the comparatively rare instance of studying the consequences of an innovation's diffusion (rather than studying the adopting population, or the diffusion process *per se*), for example in Pelto's study of Finnish Laplander culture over several years (1973). The panel study takes the form of 'before' and 'after' interviews with respondents, and may be combined with field experiments in which an innovation is introduced on a trial basis and its results evaluated under realistic conditions. This method could be useful to me in tracking the development of particular individuals' attitudes to the Alliance and the activities it generated over the duration of my research, and thus in analysing some of the outcomes of the teaching schools project.

Recent scholarly work on the diffusion of innovations has focused on **predictive statistical modelling** of the diffusion process from the perspectives of economics and marketing (Wejnert, 2002; Frenzel-Baudisch & Grupp, 2006; Peres, Muller & Mahajan, 2010.) My aim was not to produce a mathematical model of the diffusion process in my subject Alliance, but rather to uncover respondents' attitudes to the Alliance's work as it affected them, so I did not employ sophisticated predictive modelling as a tool in my study.

Because I wanted to understand the 'social realities and lived experiences' of my respondents, and because these realities and experiences are multi-dimensional (Mason, 2006), I decided to take a mixed-methods approach to data collection and analysis. I shall next discuss the implications of this decision.

3.5   Mixed methods research design

Teddlie and Tashakkori (2009) warn that selecting a truly mixed-methods research design needs to be for good reasons, and not just because it is a fashionable approach taken perhaps in response to concerns about the 'false dualism' of quantitative versus qualitative research (Pring, 2000). I argue that my research questions did require a mixed-methods design because I needed data in quantitative form (notated following Morse (2003) as QUAN) to trace *how* innovations diffused through my subject system; and I also needed data

in qualitative form (notated as QUAL) to help me understand *why* innovations were adopted or not adopted (an insight which QUAN data alone could not provide). There were thus two distinct sets of inferences to be drawn from two strands of the study, and my ultimate aim was to integrate or 'mesh' these inferences (Teddlie & Tashakkori, 2009; Mason, 2006) in order to provide a rich and deep picture of how my respondents saw the influence of the teaching school alliance on their working lives. It was also helpful to my project that mixed-methods designs are often emergent and opportunistic: because I did not know exactly what I would find, it would be possible to amend my research design to follow up leads as they occurred.

Because my aim was to understand the diffusion of an innovation over time, my research design needed to be longitudinal, taking place over an extended period and making more than one observation. Using data collected at different points in the development of the Alliance, I would be able to describe both the relationship between variables at any one point, and to account for changes occurring in those relationships over time (Cohen, Manion & Morrison, 2007). The opportunity to survey longitudinally is rare in doctoral research projects, which usually have to be completed within a short time frame. I was glad to take advantage of the longer time available to me as a part-time EdD researcher (up to five years, rather than the full-time limit of three years) so that I could track the development of the Alliance's work in detail, not merely sample it once.

Following Teddlie and Tashakkori's (2009) Methods-Strands Matrix, the most appropriate research design to answer my research questions seemed to be a **multi-strand, sequential, mixed-methods design**. This means that at least two strands of investigation run chronologically: the conclusions based on the first strand lead to the formulation of design components of the next strand. The second strand is conducted either to confirm or disconfirm inferences from the first strand, or to provide further explanation for its findings. My aim was to uncover *how* the innovation spread through the system, and then as a necessarily subsequent step to understand *why* it spread or did not spread, and therefore the sequential nature of this design was appropriate. Using Morse's (2003) notation system, my project thus took a QUAN → QUAL form. Further, because I needed to follow the diffusion of the innovation over time in order to answer my research questions, my design needed to be longitudinal in form with the same QUAN → QUAL sequence conducted in several iterations over an extended period. The complete research design, showing Teddlie and Tashakkori's (2009) stages of each strand, is illustrated in Figure 3.1 below:
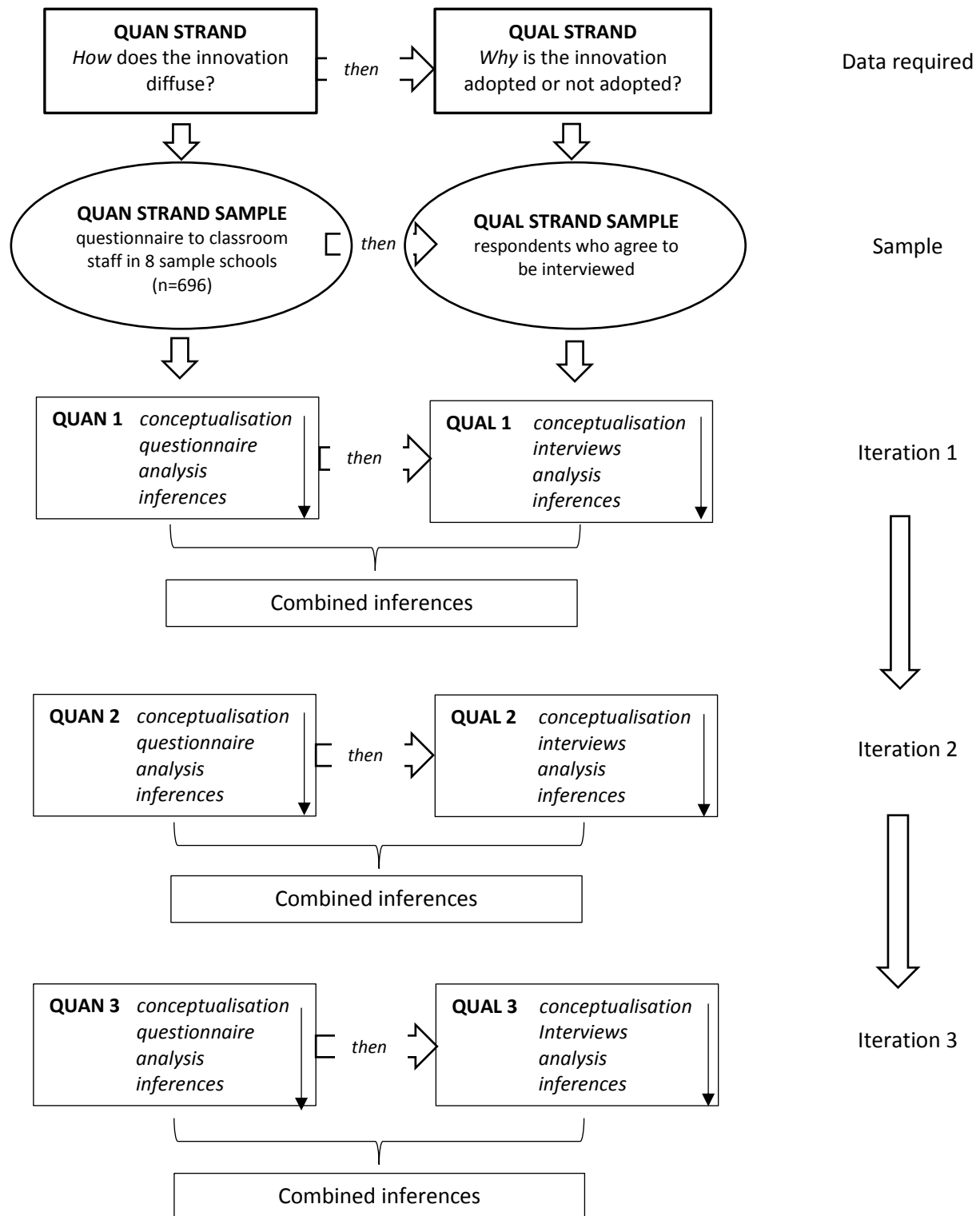
Figure 3.1: Multi-strand, sequential, mixed-methods research design (after Teddlie & Tashakkori, 2009)

The diagram above shows the iterative, sequential mixed-methods research design that I adopted for my case study. Each phase of the sequential design is shown in a box labelled

with the strand (QUAN or QUAL) and the iteration (1, 2 or 3) to which it belongs. The sequence of actions to be conducted in each phase is shown inside the box: **conceptualisation** (selection of questions and design of the collection instruments), then either **questionnaire** or **interviews** (administering the instrument appropriate to the data collection strand), then **analysis** of the data collected, then drawing **inferences** from that analysis. At the end of each iteration, inferences from both strands, QUAN and QUAL, are combined to produce a rich, 'thick' picture of the case at that stage of its development.

The first strand to be undertaken in each iteration was the QUAN element in the form of a questionnaire. The analysis of the data collected in this strand led me to draw inferences both about the content and implications of the answers given by my respondents, and about the practical conduct of data collection and analysis, which could inform the following QUAL strand in the same iteration. Likewise, combined inferences drawn at the end of an iteration could inform the following iteration.

I understood that this was an ambitious and challenging design for a part-time, solo researcher to undertake. However, the sequential element of the design allowed me to space out the strands of my research over the time I had available. My planned timeline for the full study is shown below in Table 3.3:

Table 3.3: Planned timeline for my multi-strand, sequential, mixed-methods case study

Year	EdD Term	Activities
2013	1	design QUAN 1
2014	2	QUAN 1 → analysis → design QUAL 1
	3	QUAL 1 → analysis → write up Iteration 1 findings
	4	design QUAN 2
2015	5	QUAN 2 → analysis → design QUAL 2
	6	QUAL 2 → analysis → write up Iteration 2 findings
	7	design QUAN 3
2016	8	QUAN 3 → analysis → design QUAL 3
	9	QUAL 3 → analysis → write up Iteration 3 findings
	10	draft thesis
2017	11	revisions to thesis
	12	final revisions and submission of thesis
	13	examination

Table 3.3 above shows the allocation of time necessary to conduct a total of three iterations of my sequential, mixed-methods research design within the time limits of the EdD course. The advantage of this sequential plan was that each iteration could be dealt with in turn, rather than waiting until the completion of the whole data collection phase to analyse and write up findings. I was thus able to break up these time-consuming tasks into smaller, more manageable packets. In addition, in keeping with my research design, the findings that each iteration generated could inform the design and execution of the following one. If key tasks took longer than expected, or if circumstances changed either in my own situation or in any of my sample schools, then there was sufficient flexibility in the plan to adjust the timings of later phases. If a sample school had to withdraw entirely from the project, it could be replaced with another, similar school for the next iteration of data collection; in this eventuality, validity of the data collected would inevitably be compromised, but not as damagingly as a withdrawal without replacement would cause. As it turned out, there were no withdrawals from my sample of schools.

The design and testing of appropriate and reliable instruments for data collection, and their deployment according to a coherent plan, were key to the success of the project and will be discussed next in this Chapter.

3.6   Data collection instruments

In this section, I present my research instruments – a questionnaire for the QUAN strand and an interview for the QUAL strand – and discuss their design and exploitation. I consider potential biases and gaps in their design, and discuss the steps I took to mitigate these. A full participant's version of each iteration's questionnaire is shown in Appendix 1.

3.6.1   Quantitative strand: questionnaire

I decided to use a written questionnaire to collect QUAN data relevant to my first research question about how innovations diffuse among classroom teaching staff in schools that are members of the Alliance. I made this choice because I needed to counter potential coverage and sampling errors by accessing as large and broad a population as possible, and the relative ease of distributing written questionnaires to my sample schools made this tool a sensible choice. I distributed questionnaires to every teacher and non-QTS teaching assistant in each of my eight sample schools, a total of 728 people in 2014-15. I was aware of the likelihood that some individuals in the sample would never or would only partially

respond ('attrition' according to Teddlie and Tashakkori, 2009). There were also potential problems in the construction of the questionnaire, such as low construct validity (my questions might not ask about key information); coverage error (some population members have no chance of being selected for the survey); sampling error (my sample is not representative of the population as a whole); non-response error (some members of the sample do not respond and are different from those that do); and measurement error (a respondent's answer to a question is inaccurate) (de Leeuw, Hox & Dillman, 2008). I attempted to reduce or remove these errors by careful design and testing, and by amending the questionnaire where necessary in subsequent iterations of the QUAN phase, as my sequential research design permitted me to do.

My questionnaire was designed to collect data on (1) demographic factors which might influence the diffusion of innovations, such as the respondent's gender, qualification level and length of service, and school size; and (2) characteristics of the individual and of his or her school which have been shown by previous research to be relevant to the diffusion process (Rogers, 2003; Wejnert, 2002) and made specific to this project on the Alliance. These were principally: personal characteristics of the respondent; attitudes to change and to collaboration; attitudes to the Alliance's work; and the nature of the respondent's professional social network.

Question selection

My first group of questions (Questions 1 to 5) collected information on the respondent's **personal characteristics**. I did this in order to map my sample more closely, and also to understand the professional characteristics of my respondents. An individual's 'socio-economic characteristics' (such as age, level of education, 'unit size' of workplace) are thought be significant in determining his or her innovativeness (Rogers, 2003). Mapped onto the educational context, I conceptualised Rogers' 'socio-economic characteristics' for the purposes of my research in the following 'professional characteristics':

- Level of experience (number of years in education work)
- Level of education (highest qualification held), widely used in innovation diffusion research
- Route into education work (as qualified teacher or as non-QTS teaching assistant)
- Size of school
- Gender, omitted from Rogers' list of characteristics, but important to understanding an individual's experience.

My second group of questions (Questions 6 to 9) addressed respondents' attitudes to the **influence of their school** on classroom staff development and on collaboration between staff. The school is the social system in which teachers and teaching assistants work on a day-to-day basis; Rogers (2003) argues that the social system is a key element of the innovation diffusion process because diffusion requires a community through which an innovation can spread.

My third group of questions (Questions 10 to 15) asked about respondents' **attitudes to change**. I asked about the *importance* of each item to them, and the *frequency* with which they experienced it, an approach to questioning commonly adopted in social science research because disparity between the two measures can reveal respondents' dissatisfaction with either the prevalence of a practice that they consider unimportant, or the paucity of a practice that they consider important. Coherence between the two measures would indicate satisfaction with the state of affairs.

My fourth group of questions (Questions 16 to 22) addressed respondents' **attitudes to the Alliance** that their schools had joined. I asked about knowledge of the innovation itself (the first step in the diffusion process in Rogers' model) and of its benefits (a key element in the second step of the diffusion process, 'persuasion'). I also asked about willingness to adopt the innovation (which is an indicator of individual innovativeness, a key prior condition of diffusion). The focus of these questions was on the principle of system-level collaboration for improvement that the Alliance represented.

My fifth group of questions (Questions 23 to 28) also asked about attitudes to the innovation, but here in terms of **the 'Big 6' strands** of a teaching school alliance's work. The focus of these questions was on the professional development of classroom staff as embodied in the various activities that a teaching school alliance might offer. I aimed to discover whether they thought any strand more important or less important compared to the others: this information would help me to understand where respondents' attention was likely to lie when they considered whether to adopt the innovation or not.

Finally, my sixth group of questions (Questions 29 to 30) asked about discussion of the Alliance among respondents' **personal contacts**. Communication between individual adopters in a social group is a key element of the diffusion of innovations process (Rogers, 2003). With these questions, I aimed to gather data on how widely or not the innovation was being discussed.

The blueprint for the first iteration's questionnaire is shown in Table 3.4 below:

Table 3.4: Blueprint for Year One questionnaire

Variable		Question	Scale
Background characteristics:			
1.	Gender	Q1	M or F
2.	Experience level (years in teaching)	Q2	no. of years
3.	Qualification level	Q3	highest qualification
4.	Route into education work	Q4 (a)	route to QTS
		or Q4 (b)	non-QTS route
5.	Size of school	Q5	no. of pupils
School-level characteristics:			
6.	Support for staff development	Q6	1 – 5
7.	Effectiveness of staff development	Q7	1 – 5
8.	Support for staff collaboration	Q8	1 – 5
9.	Effectiveness of staff collaboration	Q9	1 – 5
Attitude to change:			
10.	Importance of improvement in staff practice	Q10	1 – 5
11.	Importance of Continuing Professional Development	Q11	1 – 5
12.	Frequency of CPD attendance	Q12	1 – 5
13.	Importance of staff agency	Q13	1 – 5
14.	Frequency of staff agency	Q14	1 – 5
15.	Importance of staff reflexivity	Q15	1 – 5
Attitude to teaching school alliance:			
16.	Knowledge of alliance membership	Q16	Yes/No/Don't know
17.	Understanding of alliance's aims/functions	Q17	1 – 5
18.	Support for alliance's aims/functions	Q18	1 – 5
19.	Perception of benefits of alliance membership:		
	(a) to school	Q19	1 – 5
	(b) to pupils	Q20	1 – 5
	(c) to self	Q21	1 – 5
20.	Readiness to take part in alliance-generated activities	Q22	1 – 5
Attitude to 'Big 6' strands of alliance activity:			
21.	Continuing professional development (CPD)	Q23	1 – 5
22.	Initial teacher training (ITT)	Q24	1 – 5
23.	Leadership identification and succession planning (LSP)	Q25	1 – 5
24.	Research and development (R&D)	Q26	1 – 5
25.	School-to-school support (S2S)	Q27	1 – 5
26.	Specialist leaders of education (SLEs)	Q28	1 – 5
Social group influence on attitudes:			
27.	Contact inside own school	Q29	Yes/No
28.	Contact outside own school	Q30	Yes/No

Table 3.4 above shows the blueprint for the first iteration of my questionnaire, indicating the topic addressed by each question and the scale provided for the answer. I chose a standard

numerical Likert scale for the questions dealing with attitudes because this format is more sensitive to a variety of responses.   A Likert scale allows respondents to choose a rating on a continuum from negative to positive, rather than limiting them to a binary answer of the *yes/no* or *agree/disagree* type. The Likert scale also offers the possibility of more detailed quantitative data analysis than a simpler scale could afford. The large size of my sample indicated that a structured, closed and numerical approach in my questionnaire was more likely to produce usable data than an open, word-based format (Cohen, Manion & Morrison, 2007). However, I added a comments box at the end of the participants' version of the questionnaire form so that they could tell me anything they wanted to say. I used a simple *yes/no* scale for the small number of questions which asked for information rather than about attitudes.

Answer scale

I chose a five point Likert scale and labelled the points in ascending order from negative to positive: *not at all / not much / neutral / quite a lot / very much*. I chose this form of wording to try to capture the possible responses to my questions about respondents' attitudes to different aspects of the innovation. To reduce ambiguity and confusion by being consistent, I retained the same rating scale wording for all questions addressing attitudes. The wording therefore needed to be applicable to every question, even though different questions asked about different aspects of respondents' experiences of the innovation. The rating scale's wording was thus something of a compromise between wide applicability and intelligibility. I did not include the wording *Don't know* as an option because I was aware that this might become a default answer; however, the middle point labelled *Neutral* allowed respondents to offer no definite opinion if they so chose.

Each question used a variation on the quantifying 'how much?' format, worded to suit the topic addressed in that question. For example:

> *How much does your school encourage and support teacher development?*
>
> *How effective do you think teacher development is in your school?*
>
> *How important do you think it is that teachers determine their own professional development?*

I used this form of wording in order to avoid leading the respondent towards any particular answer, but to make it as clear as I could that I was asking for an opinion. Nevertheless, I was strongly aware that my questions could be interpreted in a number of ways, and that

achieving complete consistency of response between different respondents would be impossible. I therefore expected to encounter contradictory, incomplete or erroneous responses when I analysed the data collected by the questionnaire. Deductions drawn from the data would need to be carefully hedged for this reason, and could not be taken as certainties. However, the advantage of my multi-strand, sequential mixed-methods research design was that deductions from data collected during the QUAN phase could be checked for validity with interviewees during the QUAL phase.

Piloting the questionnaire

I piloted the full questionnaire with volunteers among colleagues in my own school (which did not form part of my research sample) in order to check reliability, practicality and time required both to complete the questionnaire and to process responses. As a result of this pilot, I made some minor amendments to wording and to question order. I clarified what I meant by 'change' by adding the term 'teacher' to 'development' in Questions 6 and 7 so as to place focus on the individual rather than on the school as a whole. I also altered the wording of Question 10 to 'improve their skills and knowledge' from 'improve their practice' because some piloters told me that they were not clear about the meaning of 'practice' in this context. Rather than put all the questions about *frequency* together after all the questions about *importance*, I rearranged Questions 6 to 15 inclusive into topic order because some piloters told me that this seemed more logical. The remaining questions were said to be clear in meaning and easy to navigate, so I left them as they were. The time taken to complete the questionnaire varied between five and ten minutes, although most piloters reported completing it relatively quickly within that range. I felt that this was not too long a time to ask my sample to take over the task, since it could be completed during a start-of-morning staff meeting or during a break without impinging overmuch on respondents' preparation or relaxation time.

I made a preliminary analysis of the comparatively small number of pilot responses to the questionnaire using version 21 of the software package *IBM SPSS Statistics* to produce a Cronbach's Alpha (α) coefficient, a measure of how closely related a set of items is as a group. The figure of 0.807 indicated a high degree of internal consistency between the ordinal variables (Questions 6 to 15 and 17 to 28) (Ritter, 2010; Henson, 2001; Cronbach, 1951). I was therefore reasonably confident that the questionnaire was reliable in that there was a fair degree of consistency in the answers given by different respondents to each question. I planned to check the questionnaire's content validity during the subsequent QUAL phase by asking interviewees to comment on the findings that I derived from my QUAN data. I would then compare these comments to the questionnaire data. I further

planned to check my QUAL data for inter-rater reliability (Mays & Pope, 1995) by asking a colleague who is familiar with the social sciences to code 10% of interview transcripts independently. The percentage agreement between us would indicate how reliable my own coding of the transcripts was (McHugh, 2012). These cross-checking procedures, which were enabled by my multi-strand, sequential mixed-methods research design, gave me some confidence that my inferences from both QUAN and QUAL data would be reasonably valid and reliable.

Analysing my quantitative data

With the aim of reducing the number of dimensions I had to work with, the data gathered by my Year One questionnaire were subjected to principal component analysis using varimax rotation (Jolliffe, 2002), which indicated the factorial structure of the data as consisting of five main factors:

1. *School-level support for change*

2. *Classroom staff attitudes to change – importance of change*

3. *Classroom staff attitudes to change – frequency of change activity*

4. *Classroom staff attitudes to Teaching School Alliance*

5. *Classroom staff attitudes to Big 6 strands of alliance activity*

Reliability (internal consistency estimate) for these factors was calculated using Cronbach's Alpha (α) and scores are shown in in Table 3.5 below:

Table 3.5: Year One questionnaire   -   factorial structure of variables on ordinal scale

Factor	Name (Questions)	α	Mean	Median	SD	Responses (n=208)	% of n
1	School-level support for change (Qs 6, 7, 8, 9)	0.839	3.98	4	0.626	196	94.2
2	Classroom staff attitudes to change: importance of change (Qs 10, 11) *see note 1 below*	*(Pearson's r = 0.601)*	4.68	5	0.533	198	95.2
3	Classroom staff attitudes to change: frequency of change activity (Qs 12, 14, 15)	0.594	3.91	4	0.717	193	92.8
4	Classroom staff attitudes to Alliance (Qs 17, 18, 19, 20, 21, 22)	0.936	2.82	3	0.934	186	89.4
5	Classroom staff attitudes to Big 6 strands (Qs 23, 24, 25, 26, 27, 28)	0.942	3.78	4	0.841	186	89.4
All	*Variables on ordinal scale (Qs 6-15, 17-28 inclusive)*	*0.908*				*158*	*76.0*

Note 1: Q13 (importance of agency) was excluded from factorial structure due to low reliability, and was followed up in interviews. See discussion in Chapter Four (section 4.3.6)

Table 3.5 above shows that the reliability (internal consistency estimate) of the Year One questionnaire's factorial structure was at least satisfactory (Factor 3), and at the upper end was strong (Factors 4 and 5), the Cronbach's Alpha ($α$) coefficient for the factors ranging from 0.594 to 0.942 (Ritter, 2010; Henson, 2001; Cronbach, 1951). I therefore decided to proceed with detailed analysis of my quantitative data by grouping individual variables under the factors that principal component analysis had identified. This approach to data reduction meant that the number of data segments that I had to deal with during my analysis phase was more manageable at factor level (five segments) than at individual variable level (28 segments).

However, I decided that I needed also to examine the data at question level by calculating mean, median and standard deviation (SD) for each question. This allowed me to trace responses to different questions within each factor, which could yield a more detailed and 'grainy' picture of what my respondents were telling me. It could also reveal anomalies in the data which would require further investigation. Such an anomaly did indeed emerge in answers to Question 13, concerning staff agency in determining their own professional

development. I discuss this issue in detail under Year One quantitative findings in Chapter Four (see section 4.2.6). In brief, this variable was included in Factor 2 (*Classroom staff attitudes to change: importance of change*), but the reliability (internal consistency estimate or α) for this factor was significantly lower than for the other factors. Having experimented with omitting each variable in turn and confirming the outcomes by bivariate correlation analysis, I decided to omit this variable from the quantitative analysis of Factor 2 as causing significant unreliability. I was able follow up the issue of agency in the second, QUAL phase of Iteration 1, as my research design permitted me to do.

Detailed analysis of each iteration's quantitative findings, both at factor level and at individual variable level, is presented in Chapter Four which follows. In the next section of this Chapter, I present the data collection instrument for the second, QUAL strand of my research design, the interview.

3.6.2   Qualitative strand: interview

The second phase of my multi-strand, sequential research design was the QUAL element, which was undertaken to confirm or disconfirm inferences from the first, QUAN strand, and to seek further explanation of its findings. In line with common practice in mixed-methods data collection strategies (Teddlie & Tashakkori, 2009), I devised a **structured interview** to seek further information about their attitudes and experiences from respondents who indicated in their questionnaire return that they would be willing to take a further part in my project.

The interview is a well-understood and widely-used tool in social science. Its advantages include efficacy in measuring attitudes and other areas of interest; it allows probing by the interviewer via supplementary questions asked in response to an interviewee's initial answer; and it can provide far more information in greater depth than a questionnaire can. The weaknesses of the interview tool include cost in terms of time and expense (including travelling to meet the interviewee); the process is interactive and reactive, so investigator effects may occur; and data analysis can be time-consuming for open-ended items (Johnson & Turner, 2003). Recording interview data for effective analysis is a key issue for the researcher. Tape-recording and more recently digital recording, subject to the interviewee's consent, is recommended by the methodological literature (Bell, 2005), but the recording content needs to be presented in writing for examination. Transcription is the common method for this, but full transcription (which can be argued to provide a 'near-true' record) is extremely time-consuming for the keyboard amateur. Partial transcription and summarising are 'less true' but more practical, particularly for a solo researcher (Drever, 2003). A

structured or semi-structured format to the interview, rather than a completely open-ended format, makes transcription and analysis of key information easier (Bell, 2005).

Question selection

For reasons of time and resources, I chose the structured interview format, and I further decided to combine in one interview the purposes of (a) following up issues raised in the questionnaire relating to my first research question; and (b) collecting data relating to my second research question about facilitators and barriers to the spreading of effective practice. Based on findings and inferences taken from the questionnaire data (which are presented in detail in Chapter Four of this thesis), I devised the following questions for a structured interview designed to last about 30 minutes:

Table 3.6:   Questions for Year One structured interviews

School level support for change
 1a.   How do you understand the terms "teaching & learning" and "collaboration"?
 1b.   Regarding collaboration, 77% said it is quite or very important, but only 67% said that collaboration with others is or quite or very effective. How much do classroom staff (teachers, TAs/HLTAs, LSAs, Instructors, etc.) in your school collaborate on teaching & learning or other professional matters with each other?
 1c.   What form/s does this collaboration take? Can you give me an example of effective collaboration?
 1d.   What would classroom staff here say are obstacles to collaborative work?

Attitude to change
 2a.   While 95% of respondents rated the importance of professional development as quite or very high, only 78% said they quite or very frequently undertake it. What would you say is the attitude among classroom staff here to improving their practice as a classroom teacher/assistant?
 2b.   Regarding the initiating of professional development <u>oneself</u>, 82 % said it was quite or very important but only 61% said they did so quite or very often. How often do you think classroom staff here take the initiative in arranging their own professional development? *[following up Q13 on agency]*
 2c.   What prompts them to do so? What form/s have their self-initiated professional development taken? What were the outcomes and how satisfied were they with them?
 2d.   What would classroom staff here say are obstacles to taking the initiative in their own professional development?

Attitude to Teaching School Alliance and its work

    3a. The level of understanding of the alliance's aims and benefits is quite low (25% quite or very high, 28% neutral). How would classroom staff here describe the format and aims of a Teaching School Alliance?

    3b. How much information has been given to staff in your school about Teaching School Alliances? Where has that information come from?

    3c. Readiness to take part in alliance-generated activities is neutral (mean score = 2.99). What would prompt classroom staff here to take part in alliance-generated activities? Have colleagues taken part in any such activities this academic year, and if so what were they?

    3d. Have you talked to anyone inside (26% did) or outside (33% did) your own school about Teaching School Alliances? If so, what sorts of things did you discuss?

    3e. What would classroom staff here say are obstacles to getting involved in alliance-generated activities?

Open answers

    Is there anything else you'd like to mention concerning this project, the survey or Teaching School Alliances?

This table shows the questions that I devised to follow up specific issues that analysis of my Year One quantitative data indicated were of interest with regard to my research questions, or were possibly problematic (as in the case of Question 13). I present responses to these questions in detail in Chapter Four of this thesis in the sections dealing with Year One qualitative analysis.

Selection of interview sample

I contacted the 33 respondents to my questionnaire who had indicated willingness to take a further part in the project, asking for an interview in the latter part of the Summer Term of 2014 when both they and I could expect to be a little less busy at school due to exam classes being on study leave. A total of 18 people replied to this request and I secured interviews with eight of them within the window I had available. Two interviews were of two people together for the convenience of visiting a school only once; I was aware of the potential distortions that might occur when more than one interviewee is present (Bell, 2005) and I took steps to encourage each person to feel able to contribute equally and to differ from the other where desired. I recorded all interviews digitally and stored the files only on my home computer, not on my school laptop/server. I transcribed each interview in full. The consent form I used for the interviews is shown in Appendix 2.

Analysing my qualitative data

A useful overview of the successive stages of the qualitative data analysis process, from assembling the raw data and coding it, to interpreting the meaning of themes and descriptions derived from analysis, and then validating the accuracy of the information, is offered by Cresswell (2014). I have adapted his model to show in Figure 3.2 below the features that I have taken from grounded theory research for my multi-strand, sequential mixed-methods research design: the sequence starts at the bottom of the diagram:
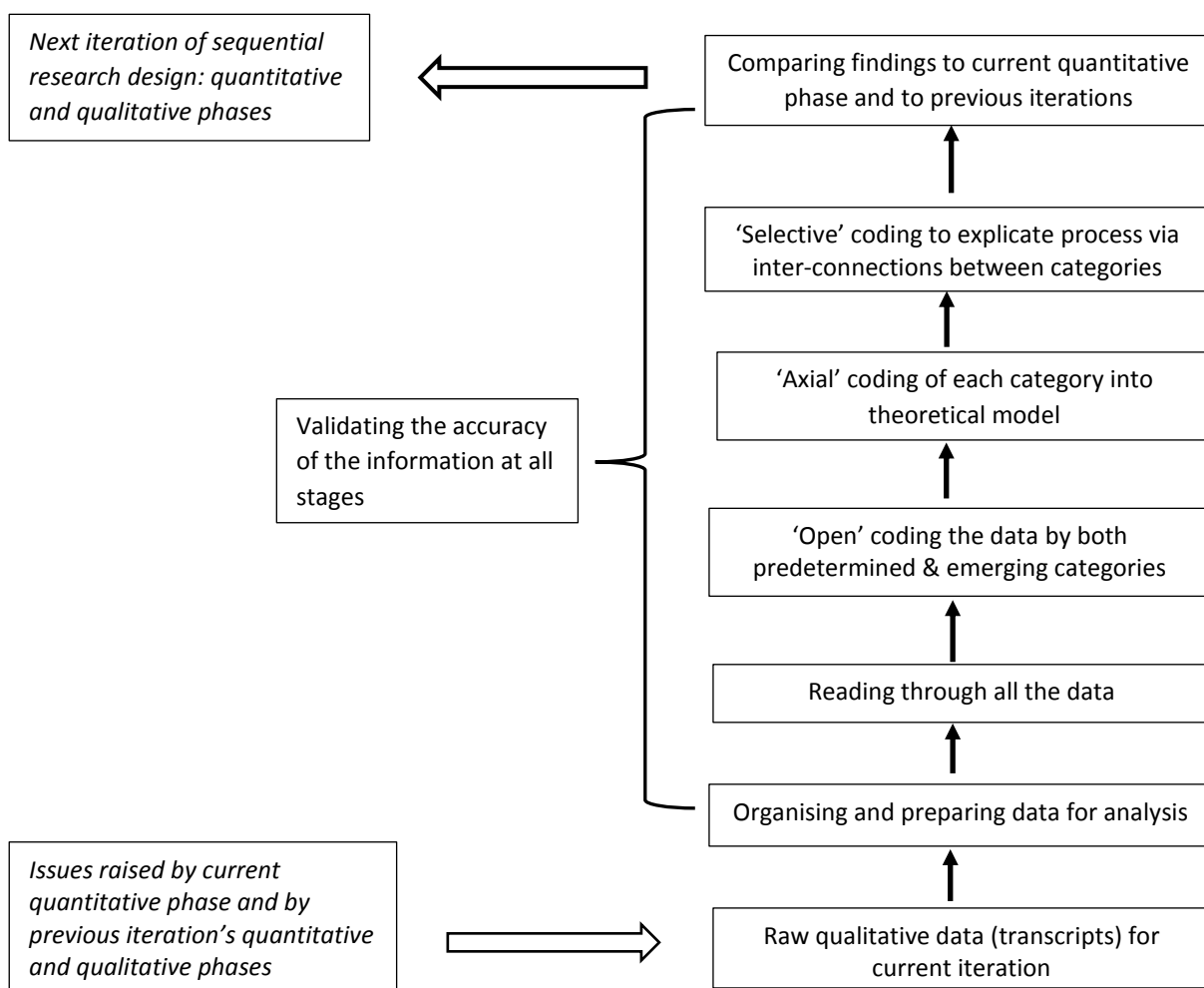
Figure 3.2:   Data analysis in qualitative research   (after Cresswell, 2014)

The diagram above shows the successive stages of qualitative data analysis suggested by Cresswell (2014) that I adapted to take account of the sequential and iterative nature of my research design. Each iteration of the QUAN → QUAL sequence placed the QUAL strand second after the QUAN strand and thus able to respond to it. Successive iterations could be influenced by data found and issues that emerged in preceding iterations.

Qualitative research is undertaken to understand a particular situation, event, role, group or interaction (Locke, Spirduso & Silverman, 2013). I aimed to use the qualitative phase of my research design to seek further information on specific issues that questionnaire responses identified as significant or problematic. Because of the particularity of a case study frame, my **approach** to analysing the qualitative evidence that I collected was influenced in part by the principles of grounded theory as articulated in the work of Glaser, Strauss and Corbin (Glaser, 1992; Strauss & Corbin, 1998). My intention was to generate an emergent theory grounded in data from the field that explained the key process that I was investigating (that is, how my case study Alliance's activities influenced the professional development of serving classroom staff) (Cresswell & Maietta, 2002). I adapted grounded theory's analytical principles to the specific demands of my project: I aimed to undertake a 'constant comparative' analytical process (Glaser, 1992; Yamagata-Lynch, 2010) which coded data by, on the one hand, categories based on the concepts which I derived from the existing literature and, on the other hand, categories which emerged from the field (which is called 'open coding' in grounded theory research). In this way I aimed to deal with unexpected or surprising data by not limiting coding categories to those employed in earlier work or predicted in the literature. Both of these category types could be confirmed or disconfirmed by previous and by subsequent data collection and analysis, which was a valuable added check on interpretive validity made possible by my sequential research design. Next, I took each category in turn and positioned it within a theoretical model of the process ('axial coding'), the form of which I initially based on my conceptual model of the influences on classroom staff's professional development (presented in Chapter Two). In a final step, I explicated a story of the process from the interconnections of these categories ('selective coding'), a process which could lead to the reconfiguration of categories in a fresh version of the theoretical model (Cresswell, 2014).

Because of the unpredictable, emerging nature of my data, I needed a more comprehensive and rigorous protocol for coding than that offered in Cresswell's basic model. Tesch (1990) provides a detailed explication of the discrete steps typical in the qualitative coding process, a sequence which I decided to employ in my first coding stage ('open coding' in grounded theory terms). She identifies eight actions:

1. Get a sense of the whole by reading through all the data;

2. Pick one transcription or summary and read it for underlying meaning – repeat for several participants;

3. Make a list of all topics revealed, cluster similar ones, and arrange into groups (major, unique and leftover);

4. Abbreviate topics as codes and annotate the data – check whether new topics and codes emerge;

5. Describe topics in suitable words and produce categories from them – attempt to trace inter-relationships between categories;

6. Confirm details of categories and alphabetise their codes;

7. Assemble data belonging to each category in one place and perform preliminary analysis (leading to axial coding of category into theoretical model);

8. If necessary, recode existing data.

To this well-established sequence I added a ninth step to reflect the mixed methods, sequential aspect of my research design:

9. Compare the current iteration's qualitative codes and findings to its quantitative codes and findings; and compare those derived from the current iteration to those of previous iterations. Reconsider and amend coding as necessary, including deriving new codes which are grounded in the data.

The detailed and rigorous approach advocated by Tesch, as shown above, has similarities to the 'constant comparative method' developed by Glaser (1992,) and modified by Yamagata-Lynch (2010), with its focus on the 'inductive' coding of each interview transcript in order to identify significant patterns and to sift out irrelevance and trivia. Combining these approaches, I developed a concise number of major categories which described the topics that I found in my qualitative data:

- **Collaboration** – importance and frequency of joint enterprise between individuals, between teams and between schools
- **Professional Development** – staff attitudes, school expectations and activities
- **Teaching School Alliance** – staff attitudes
- **Obstacles** to effectiveness of the three elements above

Each major category contains a number of more specific sub-categories, which are shown in section 4.3.11 in Chapter Four. I compared data segments to these sub-categories to check for relevance, and I compared each data segment to other segments in the same sub-category to make validating cross-references within each interview and between interviews. What each interviewee chose to mention varied quite considerably, as suggested by the large number of sub-categories, which totalled 33 in the first iteration. In addition, a major

factor in the effectiveness of the Alliance which I had not anticipated - the influence of other collaborative networks to which a school or an individual belonged - emerged during these interviews.

I tested the reliability of my coding of the qualitative data by using the inter-rater method (Mays & Pope, 1995). I asked a colleague who is familiar with research in the social sciences to code two of the Year One interview transcripts independently. The percentage agreement achieved between us for major category coding (four categories) was over 90%, a score that is considered to show 'almost perfect' agreement between raters (McHugh, 2012). The percentage agreement for sub-categories within each major category (ranging from four to thirteen sub-categories per major category) was lower at just over 70%, as would be expected (Armstrong, Gosling, Weinman & Marteau, 1997), but this score is nonetheless considered to show 'substantial' agreement.

In order to reduce the volume of material that I had to analyse, I rank ordered items within each major category by the number of interviews in which the sub-category was mentioned, and gave most time to the most commonly mentioned items. However, I did not ignore outliers amongst the sub-categories, and I was able to find useful and relevant material mentioned by only one or two interviewees. The low frequency of these responses must however lead to caution in generalising from these interviewees to the wider population.

I present in Chapter Four the detailed analysis of interview data collected during the QUAL phase of my research design. I relate QUAL data to the findings derived from the QUAN phase which preceded it and which guided the questions that I asked in interviews. In Chapter Four, I also analyse emerging issues that were not identified by the questionnaire (such as the influence of other collaborative networks), or which respondents felt that they wanted to tell me. The combined inferences that I drew from both phases of the Year One iteration (which I present in Chapter Four in section 4.3.17) were then used to inform my conceptualisation of the Year Two iteration, as my iterative, sequential research design permitted. I next describe the steps I took in modifying my data collection instruments in the light of experience gained in deploying them, and following analysis of the data that they collected.

3.6.3   Changes to data collection instruments in Year Two

A major reason for selecting an iterative, sequential mixed-methods framework for my research was so that I could respond to the emerging and unpredictable nature of the data that I was likely to collect (Teddlie & Tashakkori, 2009; Cohen, Manion & Morrison, 2007). I understood that changing some elements of the questionnaire and of the interview in later

iterations would make comparison between iterations less robust, but I accepted this cost because I judged that it was outweighed by the benefit of being able to follow up problematic or unexpected issues that my respondents told me about. I also accepted that I would not be able to develop inferential statistics connecting the various iterations' quantitative data sets. But because I was not intending to create a predictive statistical model of the innovation diffusion process, I did not need to pursue that type of analysis. The descriptive statistics that I calculated for each iteration's quantitative data set (mean, median, standard deviation) were sufficient for me to make reasonably robust, if guarded, comparisons between iterations.

A further limitation on my ability to compare data sets was that I could not ensure the same sample composition from one iteration to the next. Because the questionnaire did not ask for any identifying information in order to preserve anonymity, I could not recruit the same respondents for each iteration. I did, however, add a question in Year Two to ask whether the respondent had answered the previous iteration, in order to collect data on repeat responses. As a direct result of this limitation on questionnaire participants, and because I relied on questionnaire respondents to volunteer to be interviewed, I also could not assume that I would be able to recruit the same sample of interviewees from iteration to the next. As detailed analysis of the samples in Chapter Four shows, I found that some interviewees were willing to be interviewed again, while some were interviewed once only. On reflection, this seemed to benefit my data collection, in that I could both follow up issues raised in a previous iteration with returning interviewees, while also widening the range of responses and possibly gaining fresh perspectives from new interviewees.

Year Two questionnaire

In the Year One questionnaire, Question 13 about agency proved to be problematic, as I discussed above. I followed up this issue in Year One interviews, where it seemed that some respondents were not clear what I meant when I asked, *"How important do you think it is that teachers determine their own professional development?"* I therefore decided to amend the wording of this question to improve clarity and focus: in the Year Two version, Question 13 read *"How important do you think it is to take part in development activity that you choose yourself?"* I felt that this wording placed the question's focus more squarely on <u>activities</u> that a respondent might choose to take up, which is what my research questions were asking about.

In my Year One questionnaire, I had asked only about CPD in general, but I found in Year One interviews that respondents mentioned various sources of CPD that they might take up. Because I wanted to ask in more detail about these in Year Two, I decided to amend the

other questions included in Factor 2 and 3 (concerning classroom staff's attitudes to the importance and to the frequency of change) to correspond more clearly to the influences on professional development that I conceptualised in the framework that I presented in Chapter Two (see Figure 2.1). I therefore re-worded Questions 11, 12, 14 and 15 to ask about *"school-directed development activity"* (which I call 'hierarchical' in my conceptual framework), *"planned activity that you choose yourself"* ('heterarchical disciplined'), and *"unplanned development activity"* ('heterarchical undisciplined'). These changes meant that I could not draw direct and robust comparisons between the two iterations for Factors 2 and 3, but I judged that I would be able to interrogate more closely the issue of what respondents were thinking about when they thought of CPD.

Questions 29 and 30 in the Year One questionnaire asked about respondents' social group discussion of teaching school alliances, allowing a dichotomous *Yes/No* answer. On reflection, I decided that more detailed analysis of responses would be permitted by changing these questions to a rating scale answer, in keeping with most of the other questions.

At the end of the Year Two questionnaire, I added a new question on *"ways of schools working together"* in the light of the unexpected issue of other collaborative partnerships that had emerged in Year One interviews. I chose a rank order answer scale for this question because I wanted to find out how important respondents thought these various types of collaboration were in comparison to each other.

The blueprint for the Year Two questionnaire is shown in Table 3.7 below, and the full participants' version of the questionnaire is shown in Appendix 1. Questions changed in the light of Year One findings are marked with an asterisk (*).

Table 3.7:   Blueprint for Year Two questionnaire

Variable			Question	Scale
Background characteristics:				
1.	Gender		Q1	M or F
2.	Experience level (years in teaching)		Q2	no. of years
3.	Qualification level		Q3	highest qual.
4.	Route into education work		Q4 (a)	route to QTS
		or	Q4 (b)	non-QTS route
5.*	Responded to first iteration of survey		Q5	Yes/No
School-level characteristics:				
6.	Support for staff development		Q6	1 – 5
7.	Effectiveness of staff development		Q7	1 – 5
8.	Support for staff collaboration		Q8	1 – 5
9.	Effectiveness of staff collaboration		Q9	1 – 5

Attitude to change:

10.	Importance of improvement in staff practice	Q10	1 – 5
11.*	Importance of hierarchical CPD	Q11	1 – 5
12.*	Frequency of hierarchical CPD	Q12	1 – 5
13.*	Importance of heterarchical CPD	Q13	1 – 5
14.*	Frequency of heterarchical CPD (disciplined)	Q14	1 – 5
15.*	Frequency of heterarchical CPD (undisciplined)	Q15	1 – 5

Attitude to teaching school alliance:

16.	Understanding of alliance's aims/functions	Q16	1 – 5
17.	Support for alliance's aims/functions	Q17	1 – 5
18.	Perception of benefits of alliance membership:		
	(a) to school	Q18	1 – 5
	(b) to pupils	Q19	1 – 5
	(c) to self	Q20	1 – 5
19.	Readiness to take part in alliance-generated activities	Q21	1 – 5

Perception of 'Big 6' strands of alliance activity:

20.	Continuing professional development (CPD)	Q22	1 – 5
21.	Initial teacher training (ITT)	Q23	1 – 5
22.	Leadership identification and succession planning (LSP)	Q24	1 – 5
23.	Research and development (R&D)	Q25	1 – 5
24.	School-to-school support (S2S)	Q26	1 – 5
25.	Specialist leaders of education (SLEs)	Q27	1 – 5

Social group influence on attitudes to CPD:

26.*	Discuss professional development – own school	Q28	1 – 5
27.*	Discuss professional development – another school	Q29	1 – 5

Perception of ways of schools working together:

28.*	Rank order of inter-school collaboration models	Q30	1 – 5

    a. Academy chain / trust
    b. Federation
    c. Multi-school improvement partnership
    d. Two-school improvement partnership
    e. Teaching school alliance

29.	Knowledge of alliance membership	Q31	Yes/No/Don't know

[previously Q16 in Year One questionnaire]

This table shows the blueprint for my Year Two questionnaire. Detailed analysis of the quantitative data collected by the Year Two questionnaire is presented in Chapter Four.

I next discuss the changes I made to my Year Two interview questions in the light of my Year One findings and the changes that I made to the Year Two questionnaire.

Year Two interviews

Following analysis of the data collected by the Year Two questionnaire, I drew inferences which informed the questions that I planned to ask in my Year Two interviews. Because analysis of the Year Two QUAN data confirmed the factorial structure as being the same in both iterations of my questionnaire, I did not change the overall design of the Year Two structured interview. However, after reflecting on the range and depth of answers given by interviewees in Year One, I decided not to quote detailed score data from the Year Two questionnaire in the Year Two interview questions. With the overall aim of finding out what it was that my respondents thought about the Alliance and its work, I wanted to keep the interview as open as possible within its structured design, so that respondents would feel able to tell me what they thought, rather than merely answering questions about specific question scores.

The questions that I planned to ask in Year Two interviews are shown in Table 3.8 below:

Table 3.8:   Questions for Year Two structured interviews

School level support for change – effectiveness of collaboration
　　　　1a.　How do you understand the terms "teaching & learning" and "collaboration"?
　　　　1b.　How much do classroom staff (teachers, TAs/HLTAs, LSAs, Instructors, etc.) in your school collaborate on teaching & learning or other professional matters with each other?
　　　　1c.　What form/s does this collaboration take? Can you give me an example of effective collaboration?
　　　　1d.　What would classroom staff here say are obstacles to collaborative work?

Teachers' attitudes to change – the issue of agency
　　　　2a.　What would you say is the attitude among classroom staff here to improving their practice as a classroom teacher/assistant?
　　　　2b.　How often do you think classroom staff here take the initiative in arranging their own professional development?
　　　　2c.　What prompts them to do so? What form/s have their self-initiated professional development taken? What were the outcomes and how satisfied were they with them?
　　　　2d.　What would classroom staff here say are obstacles to taking the initiative in their own professional development?

Teachers' attitudes to Teaching School Alliance and its work
　　　　3a.　How would classroom staff here describe the format and aims of a Teaching School Alliance?
　　　　3b.　How much information has been given to staff in your school about Teaching School Alliances? Where has that information come from?
　　　　3c.　What would prompt classroom staff here to take part in alliance-generated activities? Have colleagues taken part in any such activities this academic year, and if so what were they?

3d. Have you talked to anyone inside or outside your own school about Teaching School Alliances? If so, what sorts of things did you discuss?

3e. What would classroom staff here say are obstacles to getting involved in alliance-generated activities?

Open answers

Is there anything else you'd like to mention concerning this project, the survey or Teaching School Alliances?

This table shows the questions that I planned to ask my interviewees in the QUAL phase of the Year Two iteration of my research design. In a few cases, interviewees asked for further information on what I had found in the QUAN phases, or in the previous iteration's QUAL phase, so I gave them a brief version of my findings as they requested. In the main, the fact that I omitted specific QUAN response data from my Year Two interview design did not seem to hinder interviewees in their consideration of my questions' implications for their particular experiences.

In the light of this outcome, I judged that I could reasonably continue with my policy of making adjustments to my data collection instruments where appropriate and necessary. In the next section, I describe the changes that I made to my Year Three questionnaire and interview as a result of findings and inferences drawn from the Year Two iteration of my research design.

3.6.4   Changes to data collection instruments in Year Three

Year Three questionnaire

Given the limitations on robust comparison between iterations of a questionnaire where questions have been changed, which I discussed above, I was reluctant to make substantial changes to the Year Three questionnaire. On re-examining the data collected by the Year Two questionnaire in the light of the subsequent Year Two interviews, it seemed to me that no appreciable problems or misunderstandings had arisen. I therefore retained the same wording and order of questions throughout from the Year Two version to the Year Three version. The blueprint for Year Three is thus exactly the same as for Year Two (as presented in section 3.6.3 above), and I have not shown it again in this section in order to avoid redundancy.

The one addition that I made to the Year Three questionnaire was to provide more information in one question. In response to an apparent lack of knowledge regarding the various types of between-schools collaboration that I offered in Question 30, which was

confirmed by some interviewees in the Year Two QUAL phase, I added a brief description of each type so that respondents had a better idea of what I was asking about. A copy of the full participants' version of the Year Three questionnaire is shown in Appendix 1.

Year Three interviews

At the end of the project's data collection phase, I used a semi-structured interview format different from that used in Year One and Year Two. My aim in changing the way I interviewed was to open up opportunities for interviewees to offer their thoughts on my findings and inferences over the three years of the project. I showed each interviewee a copy of Figure 4.1 (*Questionnaire factor mean scores across all three iterations*) and invited comment on what they thought the data might show. I again ensured that there was space for interviewees to mention any issues that they considered important, even if I had not asked directly about them. The questions that I planned to ask in the Year Three interviews are shown in Table 3.9 below:

Table 3.9:   Questions for Year Three semi-structured interviews

1. What does between-schools collaboration mean to you?
2. What has been your experience of the Alliance?
3. What do you think might explain the data gathered from the questionnaire iterations (referring to Figure 4.1)?
4. How do you think classroom staff's professional development can be taken forward?
5. Anything else you'd like to mention?

These more open-ended questions were designed to elicit interviewees' attitudes to and thoughts about the Alliance specifically, and to between-schools collaboration in general, in the light of three years' experience of the innovation. It also seemed useful to my research to ask interviewees whether they agreed with my interpretation of the data that I had collected over the three years. It could be that I had not seen, or had misunderstood, something that was of substantial concern to people who had lived through the innovation diffusion process as staff employed in schools participating in the Alliance, and thus as potential adopters. The answers that these questions prompted did differ from those that I collected in earlier iterations, and they added to the rich and thick picture of the case that I was able to build up. Asking my interviewees to comment on my findings also acted as a form of triangulation of the data. As a solo researcher without project co-workers to consult, I found this very valuable in helping me to develop as balanced and unbiased an analysis of my data as it was possible to achieve in the circumstances.

In Chapter Four which follows, I present in detail my findings derived from the three iterations of my multi-strand, sequential, mixed-methods research design. I organise the data chronologically by iteration (Year One, then Year Two, then Year Three) and, within each iteration, sequentially as successive QUAN and QUAL phases. At the end of each iteration, I develop combined inferences from the data which go towards building an emergent theory to explain the influence of a teaching school alliance on the professional development of serving classroom staff. After the third and final iteration, I present overall merged inferences drawn from the full data set.

Chapter Four

Findings

4.1 Introduction

This chapter presents detailed analysis of the data that I collected over the three iterations of my multi-strand, sequential, mixed-methods research design. I organise the data on a consecutive annual basis (Year One, then Year Two, then Year Three) so that the progression of the data set from one survey iteration to the next can be seen. Within each annual iteration, I divide the data into, firstly, the quantitative strand derived from questionnaire responses (QUAN) and, secondly, the qualitative strand derived from subsequent interviews which followed up questionnaire findings (QUAL). After presenting these three annual segments of data, I then present merged inferences derived from considering the relationships between the three iterations' findings. This concluding section is located at the end of this Chapter, numbered 4.5.

The first, quantitative strand of data that I collected (QUAN) was gathered via a structured questionnaire which I issued to all classroom staff (qualified teachers and non-QTS classroom assistants) in my eight sample schools. Participation in my research project by completing the questionnaire was voluntary and completely anonymous. It was not, therefore, possible to secure the same cohort of respondents from one iteration of the questionnaire to the next. While this feature should be regarded as a limitation of the data set, I judged that classroom staff would be more likely to take part if they were sure that their anonymity was secure (Ong & Weiss, 2000). Given the probably higher response rate, I decided to accept the risk that giving complete anonymity might decrease accuracy in self-reporting by eliminating participants' sense of accountability (Lelkes, Krosnick, Marx, Judd & Park, 2012). In total, I collected 709 fully or partially completed questionnaires over the three iterations. These produced approximately 21,000 question-level answers which I analysed using version 21 of the software package *IBM SPSS Statistics*.

The second, qualitative strand of data that I collected (QUAL) was gathered in Year One and Year Two via structured interviews with volunteers drawn from the eight sample schools, which aimed to follow up and test findings from the first, QUAN strand. In Year Three, I used a more open, semi-structured interview format so that interviewees had the opportunity to

offer their comments on my merged inferences over the three iterations. In total, 23 people agreed to participate in 30 interviews in the QUAL phase over the three years, and these interviews produced approximately 18 hours of recordings.

Because this was a longitudinal research project, I also had the opportunity to review the composition and conduct of each iteration, and to make changes where I judged them necessary. In this sense, my project was an evolving and emergent process which responded to what I found over time. I believe that this is an unusual and valuable aspect of my doctoral work: it has permitted me to understand the process of innovation diffusion in my case organisation in greater depth than a single point of data collection would have allowed.

4.2   Year One

4.2.1   Year One questionnaire: response rates and reliability

In total, 635 questionnaires aimed at classroom staff involved in teaching and learning were distributed in January 2014 to the eight schools in the research sample. 208 questionnaires were returned, giving an overall response rate of 33%, shown in Table 4.1 below. This is comparable to other studies of this type (Sturgis, Smith & Hughes, 2006; Kaplowitz, Hadlock & Levine, 2004). Reliability (internal consistency estimate) for the questionnaire was measured using Cronbach's Alpha (α) for the variables in an ordinal scale in Q6-15 and Q17-28 inclusive. The figure computed of 0.908 indicates a high degree of internal consistency between items in the questionnaire (Ritter, 2010; Henson, 2001; Cronbach, 1951).

Table 4.1:   Year One questionnaire   -   Response rates (January 2014)

School	Category	Qs out	Qs in	Response %
Albuhera High School	11-18 +sixth form	103[1]	41	40%
Charleston High School	11-18 +sixth form	59	22	37%
Dettingen School	3-19 special	84	20	24%
Gallipoli School	3-19 special	93	42	45%
Lucknow High School	11-16 rural	63	32	51%
Minden High School	11-18 rural	25[2]	20	80%
Normandy High School	11-16 town	122	25	21%
St Lucia High School	11-16 town	86	6	7%
Total		**635**	**208**	**33%**

Notes: *[1] figure is for teachers only and excludes TAs, who were not issued questionnaires*

[2] focus group of 25 teachers agreed with Headteacher for testing of questionnaire

The table above shows the response rates by school to the Year One questionnaire. Response rates vary widely between schools, with no evident pattern by school category, location or size. Following up this issue in interviews, it emerged that the main factor affecting response rate was the attitude to the questionnaire of the 'gatekeeper' (the Headteacher, or the nominated senior leader who had been delegated the task of presenting it to the school staff). Schools with higher response rates issued the questionnaire during a whole-staff meeting and asked respondents to complete it there and then for collection by a senior leader (a more directed approach), while others placed copies of the questionnaire into staff pigeon-holes and asked for completed copies to be returned by respondents to a

collection point by a deadline (a less directed approach). Although it does not meet Nulty's (2008) 'stringent' condition of about 50% for this size of sample, I judged that the overall response rate to my questionnaire of 33% was adequate given the probably minimal impact of a lower response rate on outcomes of a survey of attitudes (Curtin, Presser & Singer, 2000). On the same basis, I judged that individual schools' response rates were adequate for comparative analysis between them, with the clear exception of St Lucia High School (response rate = 7%) which I excluded from this aspect of analysis. I therefore proceeded with quantitative analysis of Year One questionnaire data as described in detail below.

4.2.2   Year One questionnaire: demographic characteristics of respondents (Qs 1-5)

Demographic information about questionnaire respondents was collected under Questions 1 to 5 inclusive. Of the 208 respondents in total, 65 were male and 142 female; one person declined to answer this question. The average reported length of service was 12.2 years; 15 respondents (7%) were NQTs or new classroom teaching assistants, and a further 25 (12%) were in the second or third year of their careers; 49 respondents (24%) had 20 or more years' service. Of the 165 respondents with degree-level qualifications, 32 (19% of degree holders) had either a master's degree or a doctorate. It was apparent from written-in answers that the available options did not include NVQ as a qualification: this was added to subsequent iterations of the questionnaire. Qualified teachers reported a variety of routes into education: 21 took a BEd, 4 a CertEd, 71 a PGCE, 31 entered via SCITT, 11 via GTP, three via School Direct and one via Teach First. Some SCITT entrants also gained PGCE and were counted in the latter category. Of the respondents who reported not having QTS, 12 entered via professional training in another field. 'Other' routes into education work were reported by 31 respondents.   A further 14 people, all working in special schools, did not answer this question.

On an individual school basis, Charleston High School reported a significantly higher average length of service (16.3 years) compared to the overall mean of 12.2, while Albuhera High School reported significantly lower at 7.6 years. Unsurprisingly given the composition of staffs in special schools, a higher proportion of respondents in Dettingen and Gallipoli Schools (around 25%) were classroom assistants without QTS than was the case for mainstream schools. A large majority of respondents in each mainstream school held a bachelor's degree as their highest qualification, with typically around 20% of a school's graduate staff holding a master's degree; fewer respondents in special schools held these qualifications. Doctorates were few in number: only four in total spread between three mainstream schools.

4.2.3 Year One questionnaire: descriptive statistics

Descriptive statistics for all valid responses (n = 208) to the Year One Questionnaire are shown in Table 4.2 below.

The table shows the mean score (on a scale from 1 to 5), the median score and the standard deviation for each variable which is on an ordinal scale. Variables numbered 16, 28 and 29 were not on an ordinal scale and have therefore been excluded from this table. It appears that mean scores vary quite widely from 2.62 (Q20) to 4.73 (Q10), with higher means mostly found in variables dealing with professional development, and lower means mostly found in variables dealing with the aims and benefits of a teaching school alliance. The same distinction is seen in standard deviations, where lower SDs are mostly found in variables dealing with professional development, and higher SDs mostly found in variables dealing with the aims and benefits of a teaching school alliance.

Table 4.2: Year One questionnaire - descriptive statistics

Question no.	Variable description	Mean	Median	SD
6	School support for teacher development	4.16*	4	0.743
7	Effectiveness of teacher development	3.92	4	0.725
8	School support for teacher collaboration	3.98	4	0.785
9	Effectiveness of teacher collaboration	3.80	4	0.829
10	Importance of improving practice	4.73	5	0.556
11	Importance of CPD	4.64	5	0.643
12	Frequency of CPD	3.99	4	0.992
13	Importance of agency	4.24	4	0.679
14	Frequency of agency	3.57	4	1.089
15	Frequency of reflexivity	4.15	4	0.819
17	Understand alliance's aims	2.66	3	1.157
18	Support alliance's aims	3.04	3	1.051
19	Benefits of membership to school	2.77	3	1.112
20	Benefits of membership to pupils	2.62	3	1.006
21	Benefits of membership to oneself	2.63	3	1.049
22	Willingness to take part	2.99	3	1.105
23	Perception of CPD strand	4.02	4	0.963
24	Perception of ITT strand	3.97	4	0.984
25	Perception of LSP strand	3.73	4	0.938
26	Perception of R&D strand	3.64	4	0.992
27	Perception of S2S strand	3.79	4	0.927
28	Perception of SLEs strand	3.55	4	0.959

* 1 = not at all, 2 = not much, 3 = neutral, 4 = quite a lot, 5 = very much

4.2.4   Year One questionnaire: factorial structure

The data gathered by the Year One questionnaire were subjected to principal component analysis using varimax rotation (Jolliffe, 2002), which confirmed the factorial structure of the questionnaire as consisting of five main factors:

1.   *School-level support for change*

2.   *Classroom staff attitudes to change – importance of change*

3.   *Classroom staff attitudes to change – frequency of change activity*

4.   *Classroom staff attitudes to Teaching School Alliance*

5.   *Classroom staff attitudes to Big 6 strands of alliance activity*

Reliability (internal consistency estimate) for these factors was calculated using Cronbach's Alpha (α) and scores are shown in Table 4.3 below:

Table 4.3: Year One questionnaire -   factorial structure of variables on ordinal scale

Factor	Name (Questions)	α	Mean	Median	SD	Responses (*n*=208)	% of *n*
1	School-level support for change (Qs 6, 7, 8, 9)	0.839	3.98	4	0.626	196	94.2
2	Classroom staff attitudes to change: importance of change (Qs 10, 11) *see note 1 below*	*(Pearson's r = 0.601)*	4.68	5	0.533	198	95.2
3	Classroom staff attitudes to change: frequency of change activity (Qs 12, 14, 15)	0.594	3.91	4	0.717	193	92.8
4	Classroom staff attitudes to Alliance (Qs 17, 18, 19, 20, 21, 22)	0.936	2.82	3	0.934	186	89.4
5	Classroom staff attitudes to Big 6 strands (Qs 23, 24, 25, 26, 27, 28)	0.942	3.78	4	0.841	186	89.4
All	*Variables on ordinal scale* (Qs 6-15, 17-28 inclusive)	*0.908*				*158*	*76.0*

Note 1: Q13 (importance of agency) was excluded from factorial structure due to low reliability, and was followed up in interviews. See discussion in section 4.2.6 below.

The table above shows that the reliability (internal consistency estimate) of the questionnaire's factorial structure is at least satisfactory (Factor 3), and at the upper end is strong (Factors 4 and 5), the Cronbach's Alpha ($α$) coefficient for the factors ranging from 0.594 to 0.942 (Ritter, 2010; Henson, 2001; Cronbach, 1951). I therefore decided to proceed with detailed analysis of the questionnaire data by grouping individual variables under the factors that principal component analysis had identified. I present this detailed analysis in the following sections.

4.2.5 Year One questionnaire: Factor 1 (School-level support for change, Qs 6 to 9)

A large majority of respondents to this survey (85.2% of valid responses) felt that their schools encourage and support teacher development 'quite a lot' or 'very much' (Q6: mean score = 4.16 out of 5, SD = 0.743); the *effectiveness* of such development was scored lower with 73.3% rating it as quite or very effective (Q7: mean = 3.92, SD = 0.725). Similarly, the level of school support for teacher collaboration was rated quite or very high by 77.2% (Q8: mean = 3.98, SD = 0.785) and the *effectiveness* of collaboration was rated quite or very high by 67.2% (Q9: mean = 3.80, SD = 0.829). For this last variable and unlike the three preceding questions, more respondents rated it 'neutral' (score = 3) than rated it 'very much' (score = 5). The reliability of responses to this factor is high: Cronbach's Alpha ($α$) is 0.839 for Q6, 7, 8 and 9 taken together across the whole sample. Charleston High School respondents scored this factor higher than the other sample schools, while Dettingen School and Lucknow High School scored it lower. St Lucia High School was excluded from between-schools comparisons due to its very low response rate of 7%.

There thus appeared to be a gap, though not a large one, between policy and practice in the experience of a significant minority of classroom staff in all eight schools being studied: the relatively strong sense of being supported in professional development and collaboration was not entirely matched by practical outcomes. Reasons which might explain this observation emerged during follow-up interviews, and are discussed in section 4.2.13 below.

4.2.6 Year One questionnaire: Factors 2 and 3 (Classroom staff attitudes to importance of and frequency of change, Qs 10 to 15)

Reported attitudes to change (conceptualised in my research as 'professional development') demonstrated a gap between aspiration and reality similar to that found in school-level support for change, discussed above. The *importance* of improving professional practice was rated quite or very highly in 95.5% of valid responses (Q10: mean = 4.73 out of 5, SD = 0.556) and the *importance* of undertaking continued professional development (CPD) was

rated by 94.5% as quite or very high (Q11: mean = 4.64, SD = 0.643). However, the score for the *frequency* of engagement in CPD was lower: 77.7% of respondents rated their activity as 'quite a lot' (the mode for this question) or 'very much' (Q12: mean = 3.99, SD = 0.992). One possible deduction is that nearly 20% of respondents did not engage in CPD as often as they felt they should. An alternative explanation is that some respondents simply reported low frequency of CPD regardless of their attitudes to its importance. Charleston High School respondents scored frequency of CPD activity (Q12) higher than did other schools; Dettingen and Gallipoli Schools and Lucknow High School all scored Q12 below a mean of 4.

The issue of *teacher agency* (making one's own choices) in pursuing professional development was revealed as problematic in this survey. A total of 81.7% of valid responses rated agency as quite or very important (Q13: mean = 4.24, SD = 0.679) but only 60.8% reported initiating their own development quite or very often (Q14: mean = 3.57, SD = 1.089) and more respondents rated frequency of agency as 'neutral' (score = 3) than rated it 'very often' (score = 5.) However, respondents reported a relatively high frequency of reflexive thinking (Q15: mean = 4.15, SD = 0.819). The picture is complicated by relatively low reliability when questions grouped under Factor 2 are taken together: Qs10, 11 and 13 which address *importance* of change have a moderate Cronbach's Alpha ($α$) of 0.548. Omitting Q13 about the importance of teacher agency, the bivariate correlation (Pearson's r), a measure of the linear correlation between two variables, for Q10 plus Q11 is 0.601. Factor 3 (Q12, 14 and 15) which addresses *frequency* of change activity has a moderate $α$ of 0.594; no variable omitted produces a significantly higher figure for bivariate correlation, and the omission of Q14 about frequency of teacher agency produces yet lower figures (unlike the Factor 2 questions dealing with importance). An indication of the uncertainty with which Q13 was approached is the unusually low score accorded to it by Charleston High School respondents (who had scored the other questions in this section higher than other schools), while schools which reported comparatively low scores for other questions scored Q13 higher. Respondents at Minden High School scored all the questions on agency and reflexivity (Q13, 14 and 15) comparatively higher than they scored other questions under Factors 1, 2 and 3.

A working hypothesis to explain this phenomenon is that a significant number of respondents had not considered the meaning and implications of agency when it came to their professional development. This theory might be supported by bivariate correlation analysis between the variables grouped under these factors: there is very weak correlation between reported attitudes to the importance of improving practice (Q10) and the importance of teacher agency (Q13) (Pearson's r = 0.157); between the importance of CPD (Q11) and the importance of teacher agency (Q13) (r = 0.141); and between importance (Q13) and frequency (Q14) of agency (r = 0.064). Correlation is only weakly positive between frequency of agency (Q14) and frequency of reflexivity (Q15) (r = 0.372). This inference was tested in

interviews which followed initial analysis of the questionnaire, and which are discussed in the relevant sections below.

4.2.7 Year One questionnaire: Factor 4 (Classroom staff attitudes to Teaching School Alliance, Qs 17 to 22)

Classroom staff responses were much clearer when it came to attitudes to the Teaching School Alliance which their schools had joined (even though over a third did not know whether their school is a member or not, and three people got it wrong (Q16)). Knowledge of the alliance appeared to be relatively thin: 24.9% of valid responses rated understanding of the aims of the alliance as quite or very high and 27.9% were neutral (Q17: mean = 2.66, SD = 1.157). Support for the alliance was a little higher with 30.6% scoring it as quite or very high and 46.8% as neutral (Q18: mean = 3.04, SD = 1.051). Understanding of the benefits of alliance membership to schools (Q19: mean = 2.77, SD = 1.112), to pupils (Q20: mean = 2.62, SD = 1.006) and to classroom staff professionally (Q21: mean = 2.63, SD = 1.049) was equally uncommitted: 41.2%, 44.7% and 43.7% respectively scored these variables as 'neutral', and the percentages scoring them as 'very high' were tiny (5.2%, 2.5% and 3.6% respectively). Willingness to engage in alliance activities was largely non-committal (Q22: mean = 2.99, SD = 1.105). Reliability for Factor 4 (α = 0.936) is significantly higher than for Factors 2 and 3, which suggests that respondents were consistent in reporting their attitudes to all the aspects of the Alliance raised in the questionnaire. In line with Factor 1 responses, Charleston High School respondents scored this factor higher than other schools did, and Dettingen and Lucknow scored it lower. Normandy High School reported comparatively high scores for this factor, despite not rising significantly above the overall mean for any other factor. This might be explained by the substantial leadership role played by Normandy's Headteacher in setting up the Alliance: interview data suggest that Normandy staff were given more information by senior leaders about the Alliance and its purposes compared to other schools. Interview data are discussed in more detail in section 4.2.11 below.

Triangulating data were obtained in Questions 29 and 30, which asked about social group contacts; these questions were excluded from factorial analysis because the answer scales are not ordinal. Discussions about alliance aims and activities undertaken with colleagues in their own schools are reported by 26.3% of respondents (Q29), and with colleagues in other schools by 33.0% (Q30). The theoretical work which underpins the teaching schools initiative identifies the personal networks of individuals as a valuable driver towards achieving more widespread school-to-school and teacher-to-teacher collaboration. Some researchers claim that "weak ties" with people who are not closely connected to oneself have greater influence in prompting innovation than "strong ties" with close contacts. However, interview

evidence suggests that many of the discussions reported in this survey were in fact prompted by the advent of the questionnaire which asked about them. This form of response bias, known as 'demand characteristics' whereby answers are distorted by the fact of participation in the survey (Nicols & Maner, 2008), could damage the validity of the data collected.

4.2.8   Year One questionnaire: Factor 5 (Classroom staff attitudes to Big 6 strands of Alliance activity, Qs 23 to 28)

The importance to respondents of the six strands of teaching school alliance work varied from strand to strand. Given the importance of change and of professional development in the minds of many respondents (Q10, 11), it is not surprising to find that CPD was the highest rated strand with 76.3% of valid responses scoring it as quite or very important (Q23: mean = 4.02, SD = 0.963). Next came initial teacher training (ITT) with 72.6% (Q24: mean = 3.97, SD = 0.984); then school to school support (S2S) with 66.1% (Q27: mean = 3.79, SD = 0.927) and leadership development and succession planning (LSP) with 63.0% (Q25: mean = 3.73, SD = 0.938); while the remaining two strands followed some way behind, with research and development (R&D) on 58.4% (Q26: mean = 3.64, SD = 0.992) and the development and deployment of specialist leaders of education (SLEs) on 55.6% (Q28: mean = 3.55, SD = 0.959). Reliability (internal consistency estimate) for Factor 5 (α = 0.942), as for Factor 4, is significantly higher than for Factors 2 and 3, which again suggests that classroom staff were consistent in reporting their views of the Alliance's activities. There is less variation in mean scores for this factor between schools compared to the other factors, and all schools were consistent in giving CPD and ITT their highest scores.

Given that this Alliance prioritised ITT and CPD in its first year, in common with other alliances across the country, it is clear that these strands were likely to make the most impression on classroom staff. The SLEs strand was deliberately delayed until the Alliance's second year, while R&D seems to have suffered the perennial fate of educational research in struggling to find an audience among classroom staff working in schools.

4.2.9   Inferences from Year One questionnaire

Analysis of questionnaire data, both by individual variable and by factor, led me to make the following inferences relevant to my over-arching research question about classroom staff attitudes to the influence of the Alliance on their professional development:

1. A **gap between aspiration and practical reality in terms of professional development** was revealed by Year One Questionnaire responses. Classroom staff mostly reported that their schools support change and they saw their own development as important, but they were not as active in pursuing their own development as their attitudes to it would suggest. **Agency** (making one's own choices) was a problematic concept in this regard. **Collaboration** (joint enterprise towards a shared goal) between classroom staff was also an area where aspiration and practice diverged for a significant minority of respondents.

2. Respondents were not convinced that a **teaching school alliance** would help them in their own development. Attitudes to the aims and benefits of a teaching school alliance's work were reported as neutral overall.

3. Attitudes to the **six formal strands** of alliance activity were reported as **relatively supportive** although, given respondents' caution inferred in (2) above, this may be in the abstract rather than in practical terms.

These inferences were tested during follow-up Year One Interviews, in which I used a structured interview format in order to focus on key issues that the questionnaire raised. However, I also ensured that there was space for interviewees to mention issues that they considered important, even if I had not asked directly about them. The findings of Year One interviews are presented in the following section.

4.2.10 <u>Year One interviews sample</u>

Interviewees were drawn from self-selecting volunteers in sample schools who expressed interest in taking further part in my research project by providing a contact email address on their questionnaire form. In the Year One iteration of the survey, there were 33 such volunteers. I contacted each of them to seek their agreement to an interview to follow up my questionnaire findings: 18 people replied positively to this invitation. Due to the rhythms of the school year and pressure of work, I was not able to allocate time to interviews until the summer term. Not all responses could be actioned and therefore I arranged and conducted six Year One interviews with eight volunteers, who reasonably fairly represented the whole sample in length of service, job description and school type. I also conducted a semi-structured interview on Alliance activity with a senior leader who at that time had a role in the Alliance leadership structure. Interviews were conducted between 17 and 26 June 2014. Anonymised details of the interview sample are shown in Table 4.4 below:

Table 4.4: Year One interviews sample

Pseudonym	Length of service	Job description	School type
Structured interviews to follow up questionnaire findings:			
Astrid[1]	long service	senior leader	3-19 special
Clark[2]	early career	classroom teacher	11-18 + sixth form
David	long service	subject leader	11-16 town
Dylan[2]	mid-career	classroom teacher	11-18 + sixth form
Elizabeth[1]	mid-career	classroom teacher	3-19 special
Fiona	early career	classroom teacher	11-18 rural
Julia	long service	senior leader	11-16 town
Melanie	long service	senior leader	11-16 town
[1] and [2] = paired interviews			
Semi-structured interview on Alliance activity:			
Barry	long service	Alliance leadership role	

The table above shows anonymised details of the interviewees who agreed to take part in Year One interviews, which form the second strand of data (QUAL) in my multi-strand, sequential research design, following on from the first strand collected by questionnaire (QUAN). The large number of senior leaders (four out of nine interviewees) relative to their representation on school staffs might be seen as a distortion of the sample. Their comparatively positive response to my request for an interview might be explained by their knowledge of their school's policies in general, and about participation in the Alliance in particular. Conversely, classroom staff who felt that they knew little about the Alliance (as was shown to be likely by questionnaire data) may have been less willing to be interviewed if they thought it would mean exposing perceived ignorance.

4.2.11 <u>Year One interviews findings: data coding and analysis</u>

Interviews were recorded using a digital MP3 recorder and transcribed as soon as possible afterwards. Using the constant comparative method (Yamagata-Lynch, 2010; Glaser, 1992;

Tesch, 1990) as described in Chapter Three, I coded each interview transcript inductively in order to identify significant patterns and to sift out irrelevance and trivia. I developed a concise number of major categories:

- **Collaboration** – importance and frequency of joint enterprise between individuals, between teams and between schools
- **Professional Development** – staff attitudes, school expectations and activities
- **Teaching School Alliance** – staff attitudes
- **Obstacles** to effectiveness of the three elements above

Each major category contains a number of more specific sub-categories, which are shown in Table 4.5 below. I compared data segments to these sub-categories to check for relevance, and I compared each data segment to other segments in the same sub-category to make validating cross-references within each interview and between interviews. What each interviewee chose to mention varied quite considerably, as suggested by the large number of sub-categories, which total 33 in this iteration of the survey. In addition, a major factor in the effectiveness of the Alliance which I had not anticipated - the influence of other collaborative networks to which a school or an individual belonged - emerged during these interviews.

I tested the reliability of this qualitative data using the inter-rater method (Mays & Pope, 1995). I asked a colleague who is familiar with research in the social sciences to code two of the Year One interview transcripts independently. The percentage agreement achieved between us for major category coding (four categories) was over 90%, a score that is considered to show 'almost perfect' agreement between raters (McHugh, 2012). The percentage agreement for sub-categories within each major category (ranging from four to thirteen sub-categories per major category) was lower at just over 70%, as would be expected (Armstrong, Gosling, Weinman & Marteau, 1997), but this score is nonetheless considered to show 'substantial' agreement (McHugh, 2012).

In order to reduce the volume of material that I had to analyse, I rank ordered items within each major category by the number of interviews in which the sub-category was mentioned, and gave most time to the most commonly mentioned items. However, I did not ignore outliers amongst the sub-categories, and I was able to find useful and relevant material mentioned by only one or two interviewees. The low *n* of these responses must however lead to caution in generalising from these interviewees to the wider population.

Table 4.5: Year One Interviews - coding categories

Major category	Sub-category	Code	Interviews where mentioned (*n = 7*)
Collaboration	For improvement	C-I	5
	Attitude to	C-A	4
	Leadership of	C-L	3
	Sharing good practice	C-P	3
	Sharing resources	C-R	2
	For support	C-S	2
	For advantage	C-AD	2
	Fluidity of	C-F	1
	Visiting other schools	C-V	1
Professional Development	Top-down/hierarchical	PD-TD	7
	Heterarchical planned	PD-HP	6
	Personalised	PD-P	5
	Heterarchical spontaneous	PD-HS	3
	Expectations	PD-E	3
	In-house provision	PD-I	2
Teaching School Alliance	Knowledge of	TSA-K	7
	Publicity for	TSA-P	6
	Activities	TSA-A	2
	Response to feedback	TSA-F	1
Obstacles	Time	O-T	7
	Money/funding	O-M	5
	Introspection	O-I	4
	Need/relevance	O-N	4
	Competition between schools	O-C	3
	Willingness/making effort	O-E	3
	Knowledge of opportunities	O-K	3
	Other networks preferred	O-O	3
	University links	O-U	3
	Impact on own pupils	O-IP	1
	Micro-politics	O-P	1
	Sustainability	O-S	1
	Workload	O-W	1

The table above shows the four major coding categories, and the varying number of sub-categories within each major category, that I developed during the coding phase of data analysis. I present findings drawn from each category in the following sections of this chapter.

4.2.12 <u>Major category: Collaboration</u>

Attitudes to collaborative working expressed by interviewees were largely positive (sub-category C-A).

> To me it's sharing ideas and sharing resources. We do a huge amount of that in this department. I think it's a particular strength in [name of department]. [Dylan]

> We have a collaborative approach throughout the school. [Melanie]

> I think collaboration between schools in the area and collaboration between schools and educational institutions in the country is really important. [Clark]

The most commonly cited reasons for working collaboratively were for improvement (sub-category C-I) and to share good practice (sub-category C-P). In at least four of the eight schools in the sample, the focus of collaboration for improvement was the subject department or (chiefly in special schools) the classroom team. Interviewees reported comparatively frequent sharing of planning and assessment, peer observations, lesson study and coaching activities with colleagues teaching the same subject in their own school. This was said to be particularly so among recently-trained staff, who carry over into their early careers the trainee's habit of collaborative practice, reflection and action:

> When you say the word collaboration I think to my training year, because we have a long period of time where we have collaborative teaching practice, which is before we actually enter the classroom, and I suppose in training that was observing other teachers, finding out how your school does different things. [Clark]

Collaboration between departments in the same school (for example in peer observations) was said to be comparatively rare. David reported some school-directed collaborative discussions between subject departments, "and there's a lot of pressure from senior staff that is focused on teaching and learning." Collaboration between schools occurred when schools were in a formal relationship, such as a federation or an improvement partnership:

> It's been working across schools … specifically it's about looking at good practice and sharing good practice to improve standards. [Julia]

However, Astrid, a special school senior leader, said,

On very rare occasions there has been joint training, but we don't often attend because it's so irrelevant, mainstream training, because we're a special school. [Astrid]

Both special school teachers expressed a desire to work directly with mainstream schools, particularly to use their expertise to help develop mainstream staff approaches to pupils' special educational needs and disabilities:

You bring skills to mainstream, and you learn from mainstream, and that cross-fertilisation is really good. [Astrid]

It's other schools inviting you in, making it an option. I'm not sure ten years ago that would have happened. [Elizabeth]

I think SCITTs need to have that focus on special. I know with initial teacher training, the PGCEs, they're doing a lot of focus on special needs, and we're really keen to do anything we can to support that. That's part of my collaboration with [name of university], I go and talk to the trainees. [Astrid]

4.2.13 <u>Major category: Professional Development</u>

Several interviewees reported that, both within their own school and in between-school activities, the content and form of professional development was largely or entirely determined by school leaders (sub-category PD-TD). A school leader said:

We have a CPD programme, and that's linked to the school improvement plan. So the topics are identified, for example this year, we need to develop extended writing across the school [Melanie]

and those decisions were driven by the school's latest inspection grading:

There is the external incentive of getting an Ofsted RI judgement again … We have to make more progress than any other school in the town. [Melanie]

This 'top-down, hierarchical' approach to professional development has a bearing on the issue of agency which I identified as problematic in section 4.2.6 above. Every interviewee mentioned this as the most common experience of professional development activity. Individuals who search out their own planned development opportunities beyond those

provided at school level ('heterarchical planned development', sub-category PD-HP) were reported as being comparatively rare: David said, "I'm the only person I'm aware of who's done it." Melanie thought of such colleagues as being among the "best practitioners." The personalisation of professional development (sub-category PD-P) was mentioned as important by interviewees across the range of experience and job descriptions, but emergent, individual opportunities to pursue 'heterarchical spontaneous development' (sub-category PD-HS) were usually limited to unplanned discussion or observation in an individual's own subject department:

> But it's quite a difficult one, isn't it? I think in terms of people coming to see my lessons I don't get many. [Fiona]

> You do get into the habit of not having much time outside your timetable to go in and see fresh ideas and things like that. [Clark]

Melanie said that "a high quality programme which meets needs would see the Alliance's profile rise", such as leadership preparation courses run by an external contractor that she trusted. However Julia, also a senior leader, said that leadership courses had already been set up by a pre-existing improvement partnership and that the Alliance's bid for designation "had been founded on things that were already running." By far the best attended Alliance-generated events in Year One were indeed the leadership courses run by an external contractor.

4.2.14 Major category: Teaching School Alliance

Questionnaire data discussed in section 4.2.7 above suggests that in the first year of the Alliance's life, when few teachers seemed to have witnessed activities which could be said to be generated by the Alliance, many respondents were non-committal in their attitude to it. This inference is supported by interview evidence which uniformly suggested that classroom staff had been given no introduction to or explanation of the form and functions of the Alliance to which their schools signed up (sub-category TSA-K):

> I couldn't tell you who was representing the Alliance in our school, and I don't mean that offensively. [Clark]

> There is general ignorance about it. [David]

> What *is* a teaching school alliance? [Fiona]

Lack of knowledge was widespread, extending to confusion of the Alliance with other inter-school collaborative partnerships; this emergent factor, which I had not anticipated in my structured questions, is discussed in more detail in the section following this one. A widely-raised criticism was the inadequacy of publicity about the Alliance's launch or its proposed activities (sub-category TSA-P):

> There was one introductory briefing when it was first set up. ... But the issue is that the Alliance itself hasn't generated enough publicity ... I'm disappointed. [Melanie]

Barry, an Alliance leader in Year One, said he felt that "Don't run before you can walk" was a key aspect of the Alliance leadership's approach to the launch, and that in Year Two he expected a step change up in the range of activities that the Alliance would offer (sub-category TSA-A). He identified as an Alliance goal a programme of "training the trainers" in order to increase the amount of development activity carried out by classroom staff belonging to Alliance schools. He said that the Alliance should aim to respond to member schools' needs, and this was why the main activity in Year One was leadership preparation, "which was the perceived demand in local schools".

4.2.15 Major category: Obstacles

Time was the obstacle to engaging both in collaborative work and in Alliance-generated professional development activity (sub-category O-T) mentioned by every interviewee: "that's really the biggest one" [Julia]:

> Time is a primary one because the school is laying on so much and it's taking up so much of our time, most people say I just don't have the time to do any more. [David]

> Time. Finding when people are free and things like that. Because obviously with secondary timetables, we're free here there and everywhere. It's trying to find when someone is free, and they're not marking books and they're not trying to sort out their data for their class and things like that. That's difficult. [Fiona]

For some interviewees, this factor was linked to staff willingness to make the effort required to pursue their own development priorities (sub-category O-E):

> You're expected to go in your PPA [non-contact time], which is why it's sometimes, y'know, a little bit controversial. [Dylan]

Off the top of my head, I would have said fifty fifty, so fifty percent of say about twenty teachers had taken the opportunity to go and observe other teachers, and the other fifty percent had not. [Clark]

The second most commonly mentioned obstacle to engaging in professional development activity was money or funding (sub-category O-M):

In terms of things like external courses, they are ridiculously expensive. [Fiona]

I think that more people would do it and would take more initiative with it if the financial restraints weren't there. [Clark]

Fairness demands that the budget be spread fairly around all the staff. [Barry]

The equal third ranked obstacles were introspection (sub-category O-I), that is, the tendency of individuals and of teams and schools to focus on their own immediate concerns within their normal working boundaries; and relevance or need (sub-category O-N), that is, the appropriateness of activities to classroom staff priorities or interests. These were both related by some interviewees to the hierarchical aim of achieving a better inspection grading, as noted above under the major category Professional Development in section 4.2.13.

An unexpected factor which emerged in these interviews was the persistent influence of inter-school partnerships which pre-date the Alliance (sub-category O-O). When talking with colleagues about collaboration between schools (the issue of social group contacts covered in the questionnaire under Questions 29-30), most interviewees reported basing their discussions on their knowledge of either a formal federation (where two or more schools operate under the same executive principal and governing body), or a multi-school improvement partnership (where schools choose to work together towards certain common goals) to which their schools belonged before joining the Alliance. Indeed, when trying to identify examples of effective collaboration between schools, interviewees reported uniformly that they and their colleagues credited those other partnerships:

In this last year there's been a lot of secondments happening and that's credited to [the multi-school improvement partnership]. I suppose in a sense if it's the same schools it should be the Alliance as well, but credit is going to [the improvement partnership]. [Clark]

The issue is that we have a very well developed programme for schools in the federation, and if the Alliance sets up its own subject groups that's another layer of meetings. And we have [the multi-school improvement partnership]. It gets very busy. [Melanie]

Only one interviewee (David, a subject leader) credited the Alliance with originating a development activity, which he knew about because he contributed to it as a subject specialist.

4.2.16 Inferences from Year One interviews

Analysis of interview data (QUAL), and comparison of my findings with those drawn from my questionnaire data (QUAN), leads me to make the following inferences relevant to my over-arching research question:

1. Classroom staff reported that their **schools direct their professional development** in order to meet school-level priorities. Opportunities to pursue individual needs and interests were consequently rare. This inference supports similar findings from the Year One questionnaire.

2. There was widespread **willingness to engage in collaborative developmental work**, but this was mostly limited to collaboration within an individual's immediate working team. This also supports a similar inference from the Year One questionnaire.

3. **Knowledge of the Teaching School Alliance** in the first year of operations was thin, and there was little idea of how the Alliance might aid professional development: this reflects Year One questionnaire findings. Classroom staff tended to think of **other, pre-existing partnerships** when they thought of between-schools development work.

4. The chief obstacle to engaging in collaborative development work of any kind was the **lack of time** available to classroom staff. Other important obstacles included **lack of funding**, and a tendency to **introspection** at both school and individual levels which negatively influenced the **perceived relevance** of development activities. These findings add to my understanding of why, in the Year One questionnaire, classroom

staff reported a gap between aspiration and practical reality in their professional development.

I was thus able to use the second strand (interviews) of my mixed-methods, multi-strand, sequential research design to confirm inferences from the first strand (questionnaire), and to add to my understanding of how and why the teaching school innovation spread or did not spread within my sample population. In the next section I present combined inferences drawn from the first iteration of this QUAN → QUAL sequence.

4.2.17 Combined inferences from Year One

Taking questionnaire (QUAN) and interview (QUAL) findings together, I am able to make the following inferences based on the combined data sets:

1. In terms of **innovation diffusion theory**, the 'reach' of the teaching schools innovation amongst my sample population was poor in Year One. Few respondents claimed knowledge of the innovation, and there was widespread confusion of it with other between-school partnerships. The 'significance' of the teaching school innovation to classroom staff in my sample was also poor in Year One. While supportive of the innovation in principle, classroom staff did not appear to believe that *this* Alliance would be able to help them in their professional development.

2. The problematic issue of **agency** in professional development, raised by responses to the questionnaire, needed to be further explored. For the second iteration of the questionnaire, therefore, I decided to refine the questions that dealt with agency by distinguishing between hierarchical and heterarchical forms of development. I recognised that this change would reduce the validity of direct comparison between iterations, but I judged that this was a sacrifice worth making if I was able to probe the issue in more detail in Year Two.

3. The unexpected emergence of the influence of **other between-schools partnerships** on attitudes to the Teaching School Alliance meant that the second iteration of my questionnaire needed to address this issue. I therefore decided to add questions on the importance to respondents of different types of partnership.

4. The issue of relevance or need to classroom staff of Alliance-generated activities could be followed up by gathering **attendance figures** for the various events taking place each year. These data could be used to triangulate both questionnaire and interview findings about attitudes to the Alliance and willingness to engage in its activities. I therefore planned to include this data strand in my Year Two survey.

In the next section, I present findings drawn from the second iteration of my multi-strand, sequential, mixed-methods research design.

4.3 Year Two

4.3.1 Year Two questionnaire: response rates and reliability

In total, 696 questionnaires aimed at classroom staff involved in teaching and learning were distributed in April 2015 to the eight schools in my collective case sample. 351 questionnaires were returned fully or partially completed, giving an overall response rate of 51%. The sample schools and their response rates (with Year One figures for comparison) are shown in Table 4.6 below. Reliability (internal consistency estimate) for the second iteration of the questionnaire is high with Cronbach's Alpha (α) for variables in an ordinal scale (Qs 6-27 inclusive) showing 0.826. This is lower than the Year One score of 0.908, which might be due to the larger Year Two sample size and to changes in its composition, and also to changes in some questions (which are discussed in greater detail in the relevant sections below).

Table 4.6: Year Two questionnaire response rates (April 2015)

School	Category	Qs out	Qs in	Year Two response %	Year One response %
Albuhera High School	11-18 + sixth form	103[1]	82	80%	40% [1]
Charleston High School	11-18 + sixth form	59	25	42%	37%
Dettingen School	3-19 special	85	63	74%	24%
Gallipoli School	3-19 special	95	46	50%	45%
Lucknow High School	11-16 rural	63	48	76%	51%
Minden High School	11-18 rural	83	24	29%	80% [2]
Normandy High School	11-16 town	122	33	27%	21%
St Lucia High School	11-16 town	86	30	35%	7%
Total		**696**	**351**	**51%**	**32%**

Notes: [1] figure is for teachers only and excludes TAs, who were not issued questionnaires

[2] focus group of 25 teachers agreed with Headteacher for testing of questionnaire

The table above shows Year Two questionnaire response rates by school, with Year One figures shown for comparison. Respondent characteristics are discussed in section 4.3.2 below. The response rate of 51% for the second iteration compares favourably with the 33%

response to the first iteration of the questionnaire issued in January 2014. Reasons for the improvement in response might include the later date of issue (at the start of the Summer Term rather than the start of the Spring Term), and direct contact was made with the 'gatekeepers' (Headteachers or other responsible senior leaders) of sample schools to request their help in promoting participation.

The same schools were used for Year Two as for Year One in order to maintain sample consistency and validity at school level. However, due to the fully anonymous and voluntary approach to securing responses, it was not possible to recruit precisely the same respondents in each school from year to year, and this limitation must be acknowledged when comparing one iteration of the questionnaire with another.

4.3.2   Year Two questionnaire: demographic characteristics of respondents (Qs 1-5)

Of the 351 respondents to the Year Two questionnaire, 102 (29%) were male and 248 (71%) female; one person declined to answer this question. The average reported length of service was 10.8 years. In comparison, the Year One figures were 31% male, 69% female and 12.2 years' service. For the Year Two survey, 23 respondents (7%) were NQTs or new teaching assistants, and a further 56 (16%) were in the second or third years of their careers; 54 (15.5%) respondents had 20 or more years' service.   Of the 244 respondents with degree-level qualifications, 41 (17% of graduates) had either a masters or a doctorate. In this second iteration of the questionnaire, NVQ was added as an option for this question and was selected by 29 people (8% of the total); a certificate or diploma was reported by 41 (11.5%). Qualified teachers reported the same wide range of routes into education as in the previous year: 27 took a BEd or BA+QTS, 5 a CertEd, 98 a PGCE, 44 entered via SCITT, 40 via GTP and 5 via School Direct. Some SCITT entrants also gained a PGCE and were counted under the latter category. Of the 86 people who reported not having QTS, three entered via professional training in another field. 'Other' routes into education were reported by 22 respondents and 24 people did not answer this question. 126 respondents (37%) to the Year Two questionnaire also answered the Year One iteration.

4.3.3   Year Two questionnaire descriptive statistics

Descriptive statistics for all valid responses (*n* = 351) to the Year Two questionnaire are shown in Table 4.7 below:

Table 4.7: Year Two questionnaire   -   descriptive statistics

Q no.	Variable description	Year Two Mean	Median	SD	Year One Mean	SD
6	School support for teacher development	3.91*	4	0.806	*4.16*	*0.743*
7	Effectiveness of teacher development	3.68	4	0.780	*3.92*	*0.725*
8	School support for teacher collaboration	3.92	4	1.857	*3.98*	*0.785*
9	Effectiveness of teacher collaboration	3.64	4	0.877	*3.80*	*0.829*
10	Importance of improving practice	4.73	5	0.535	*4.73*	*0.556*
11	Importance of hierarchical CPD	4.21	4	0.815	*4.64*	*0.643*
12	Frequency of hierarchical CPD	3.70	4	1.077	*3.99*	*0.992*
13	Importance of heterarchical CPD	4.25	4	0.812	*4.24*	*0.679*
14	Frequency of heterarchical CPD (planned)	2.98	3	1.210	*Q changed*	
15	Frequency of heterarchical CPD (unplanned)	2.83	3	1.144	*Q changed*	
16	Understand alliance's aims	3.04	3	1.009	*2.66*	*1.157*
17	Support alliance's aims	3.52	4	0.984	*3.04*	*1.051*
18	Benefits of membership to school	2.96	3	1.008	*2.77*	*1.112*
19	Benefits of membership to pupils	2.84	3	0.989	*2.62*	*1.006*
20	Benefits of membership to oneself	2.83	3	1.065	*2.63*	*1.049*
21	Willingness to take part	3.22	3	0.918	*2.99*	*1.105*
22	Perception of CPD strand	4.09	4	0.758	*4.02*	*0.963*
23	Perception of ITT strand	4.11	4	0.801	*3.97*	*0.984*
24	Perception of LSP strand	3.86	4	0.774	*3.73*	*0.938*
25	Perception of R&D strand	3.77	4	0.836	*3.64*	*0.992*
26	Perception of S2S strand	3.94	4	0.786	*3.79*	*0.927*
27	Perception of SLEs strand	3.80	4	0.830	*3.55*	*0.959*
28	Discuss prof development – own school	3.60	4	1.124	*Q changed*	
29	Discuss prof development – another school	2.35	2	1.280	*Q changed*	
30	Rank order of between-schools collaboration models:				*Q added*	
	a. Academy chain / trust	3.55	4	1.464		
	b. Federation	3.35	4	1.440		
	c. Multi-school improvement partnership	2.48	2	1.207		
	d. Two-school improvement partnership	3.09	3	1.233		
	e. Teaching school alliance	2.41	3	1.343		

* *1 = not at all, 2 = not much, 3 = some/fairly, 4 = quite a lot, 5 = very much*

The table above shows the mean score (on a scale from 1 to 5), the median score and the standard deviation for each variable which is on an ordinal scale. It appears that mean scores vary quite widely from 2.35 (Q29) to 4.73 (Q10), with higher means mostly found in variables dealing with professional development, and lower means mostly found in variables dealing with the aims and benefits of a teaching school alliance. These observations mirror those made for the Year One questionnaire (see section 4.2.3 above). Mean and standard deviation figures for the Year One questionnaire are shown for comparison.

4.3.4   Year Two questionnaire factorial structure

The data gathered by the Year Two questionnaire were subjected to principal component analysis using varimax rotation (Jolliffe, 2002), which confirmed the factorial structure of the questionnaire as consisting of the same five main factors as for the Year One iteration. Reliability (internal consistency estimate) scores for these factors were calculated using Cronbach's Alpha ($α$) and are shown in Table 4.8 below:

Table 4.8: Year Two questionnaire - factorial structure of variables on ordinal scale

Factor	Name (Questions)	$α$	Mean	Median	SD	Responses (n=351)	% of n
1	School-level support for change (Qs 6, 7, 8, 9)	0.594	3.78	4	0.789	333	94.9
2	Classroom staff attitudes to change: importance of change (Qs 10, 11, 13)	0.468	4.40	4	0.506	339	96.6
3	Classroom staff attitudes to change: frequency of change activity (Qs 12, 14, 15)	0.661	3.17	3	0.884	333	94.9
4	Classroom staff attitudes to Alliance (Qs 16, 17, 18, 19, 20, 21)	0.888	3.09	3	0.790	330	94.0
5	Classroom staff attitudes to Big 6 strands (Qs 22, 23, 24, 25, 26, 27)	0.885	3.94	4	0.630	316	90.0
All	*Variables on ordinal scale (Qs 6-27 inclusive)*	*0.826*				*282*	*80.3*

The $α$ score for Factors 1 and 2 in the Year Two questionnaire data is only moderate, and is markedly lower compared to the same factors in the Year One questionnaire. The small

number of variables in each factor may explain a variation in reliability scores. This phenomenon led me to experiment with omitting certain questions (as I did with Factor 2 in the Year One iteration – see section 4.2.6) and to select only teachers' responses for factorial analysis, omitting non-QTS staff. I recognised that the omission of an item might increase or decrease reliability according to the degree of error in the omitted item (Dunn, Baguley & Brunsden, 2014). The figures for these combinations of questions and respondents are shown in tables 4.9 and 4.10 below, and findings drawn from these manipulations of the data are discussed in detail in the following sections under the relevant factor headings.

Table 4.9: Year Two questionnaire   -   omitting variables from Factors 1 and 2

Factor	Name (Questions)	α	Pearson's r	Mean	Median	SD	Responses (n = 351)	% of n
1	School-level support for change							
	Qs 6, 7, 9 only	0.764		3.74	4	0.678	336	95.7
	(Qs 6, 7, 8, 9 all)	0.594		3.78	4	0.789	333	94.9
2	Classroom staff attitudes to change: importance of change							
	Qs 10, 11 only		0.346	4.46	5	0.560	342	97.4
	Qs 10, 13 only		0.366	4.48	5	0.563	344	98.0
	Qs 11, 13 only		0.091	4.23	4	0.595	341	97.2
	(Qs 10, 11, 13 all)	0.468		4.40	4	0.506	339	96.6

The table above shows that omitting Q8 ('school support for teacher collaboration'), the question in the group which has a significantly higher standard deviation than the other three, improves Factor 1's α score to 0.764.

Omitting a question from Factor 2, which contains three questions in total, means that the remaining two variables must be analysed using bivariate correlation (Pearson's r) rather than Cronbach's α. The table above shows weak correlation between the remaining variables, and very weak correlation when Q10 ('importance of improving practice') is omitted. This may indicate that respondents were not entirely confident in distinguishing between top-down (hierarchical) and agential (heterarchical) development activity.

Table 4.10: Year Two questionnaire - factorial structure: qualified teachers only

Factor	Name (Questions)	α	Mean	Median	SD	Responses (n = 218)	% of n
1	School-level support for change (Qs 6, 7, 8, 9)	0.822	3.78	4	0.688	215	98.2
2	Classroom staff attitudes to change: importance of change (Qs 10, 11, 13)	0.414	4.41	4	0.464	216	98.6
3	Classroom staff attitudes to change: frequency of change activity (Qs 12, 14, 15)	0.514	3.38	3	0.729	214	97.7
4	Classroom staff attitudes to Alliance (Qs 16, 17, 18, 19, 20, 21)	0.889	3.23	3	0.765	214	97.7
5	Classroom staff attitudes to Big 6 strands (Qs 22, 23, 24, 25, 26, 27)	0.842	3.90	4	0.579	203	92.7
All	*Ordinal variables (Qs 6-27 inclusive)*	*0.877*				*187*	*85.4*

The table above shows that if non-QTS classroom staff are separated from qualified teachers and the latter only considered (*n* = 218, 62.4% of all respondents), then *α* for Factor 1 improves from 0.594 to 0.822, which is close to the score for the full questionnaire (counting Qs 6-27). This may be an indication that teachers had a clearer picture of what school level support for change meant for their own work, a hypothesis supported by interview data which suggested that classroom teaching assistants (TAs) in some secondary schools did not receive the same information about, or the same opportunities to participate in, professional development as did qualified teachers.

Omitting non-QTS staff and considering qualified teachers only does not significantly change either Factor 2's or Factor 3's *α* score, unlike a similar treatment of Factor 1. My hypothesis to explain this phenomenon is that classroom staff were unsure about the notion of taking direct responsibility for their own professional development, as they also appeared to be in Year One.

4.3.5   Year Two questionnaire: Factor 1 (School-level support for change, Questions 6 to 9)

The wording and order of questions for this factor remained exactly the same in the second iteration of the survey as in the first, so it is possible to make direct comparisons between the iterations with some degree of confidence. The same relationship between the perceived level of support and the effectiveness of that support, that is, a gap between aspiration and reality, was observed in both iterations. It was again the case in Year Two that a significant majority of respondents felt that their schools encourage and support professional development 'quite a lot' or 'very much' (Q6: mean score = 3.91 out of 5, SD = 0.806) and the median score was again 4, but the percentage of 4s and 5s taken together fell to 73.9% (from 85.2% in Year One).The *effectiveness* of such support was, as last year, rated lower with 63.1% scoring it quite or very highly (Q7: mean = 3.68, SD = 0.780) (down from 73.3% in Year One). Similarly, the level of school support for classroom staff collaboration was rated quite or very highly by 67.2% (Q8: mean = 3.92, SD = 1.857) (down from 77.2% in Year One) and the *effectiveness* of collaboration was rated quite or very highly by 60.0% (Q9: mean = 3.64, SD = 0.877) (down from 67.2% in Year One). In Year Two, Qs 7, 8 and 9 all showed more respondents rating the variable as 'some/fairly' (score = 3) than as 'very much' (score = 5); in Year One, this was true only of Q9.

4.3.6   Year Two questionnaire: Factors 2 and 3 (Classroom staff attitudes to importance of and frequency of change, Questions 10 to 15)

In the second iteration of the questionnaire, some questions under these factors were reworded or, in one case, replaced in order to focus more precisely on the issue of agency in professional development which emerged as problematic in the first iteration. Direct comparisons between the two iterations of the questionnaire for these factors are thus less certain than for the other factors where questions remained the same. On the other hand, using my conceptual model (shown in Chapter Two in section 2.4) to separate domains of professional development activity into *'hierarchical'* (top down, school-directed, done to staff); *'heterarchical disciplined'* (chosen by individual, planned, learner-centred); and *'heterarchical undisciplined'* (spontaneous, mutual, teacher-led), I was better able to identify the types of development activity that respondents were thinking of as they answered this section of the questionnaire.

One thing that did not change between the two iterations of the survey was the gap between aspiration and practical experience in classroom staff attitudes to change, which mirrored that found under Factor 1 (school level support for change). In the Year Two version, the *importance* of developing professional practice was rated quite or very highly in 96.3% of valid responses (Q10: mean = 4.73, SD = 0.535), almost exactly the same proportion as in the

Year One version where exactly the same question was asked. The two following questions on importance of change were reworded in Year Two to distinguish between hierarchical, school-directed CPD (Q11) and heterarchical CPD chosen by the individual (Q13). The *importance* of taking part in school-directed CPD was rated quite or very highly by 82.9% of respondents (Q11: mean = 4.20, SD = 0.815), and the *importance* of CPD activity chosen oneself was similarly rated quite or very highly by 82.7% (Q13: mean = 4.25, SD = 0.812). These figures echo the high importance given to professional development activity in general in responses to the Year One questionnaire (94.5% rating it quite or very highly), although the distinction in Year Two between hierarchical and heterarchical activities may have led to a slightly more cautious range of response (the median scores for these questions being 4 rather than the 5 scored in Year One, and the standard deviations being larger than in Year One).

The *frequency* of engagement in professional development activity was lower compared to its perceived importance, as it was in Year One, although the rewording or replacing of questions makes detailed comparison between years problematic. The median scores for frequency variables were 3 (Q14 and Q15) and 4 (Q12), while for importance variables they were 4 (Q11 and Q13) and 5 (Q10). In the domain of *'hierarchical', school-directed CPD*, 63.8% of respondents reported having engaged in it quite or very frequently (Q12: mean = 3.70, SD = 1.077), nearly 20 percentage points lower than the equivalent score for its importance; only 12.8% of responses rated this form of CPD as not at all or not very frequent. In *'heterarchical disciplined' CPD, chosen oneself*, 35.0% rated their activity as quite or very frequent (Q14: mean = 2.98, SD = 1.210), a substantial gap of nearly 50 percentage points compared to importance, and 31.4% scored this variable as 1 ('not at all') or 2 ('not much'). Between these two results sat *'heterarchical undisciplined', spontaneous development activity* (a new question in Year Two) which was reported as quite or very frequent by 49.4% and as not at all or not very frequent by 35.9% (Q15: mean = 2.83, SD = 1.144). It could thus be said that the issue of agency was more closely interrogated in the second iteration of the questionnaire: classroom staff reported that they valued their own choice of CPD just as highly as they valued school-directed CPD, but that they had far fewer opportunities to follow their own choices. This interpretation is supported by interview responses, which frequently reported the prevalence of school-directed development activity and the paucity of learner-centred, self-directed opportunities. Reasons given for the latter included lack of time when nearly all time allocated for CPD was taken up by school-directed activity (the most frequent reason by far); lack of funding, particularly this year compared to last; and lack of motivation among staff, including a small number of staff who resisted change or were reluctant to collaborate.

4.3.7 Year Two questionnaire: Factor 4 (Classroom staff attitudes to Teaching School Alliance, Questions 16 to 21)

Classroom staff attitudes to the Teaching School Alliance are much clearer than attitudes to professional development, as they were in Year One. The questions under this factor remained the same as in the first iteration, so direct comparisons can be made. Even though fewer than half of all respondents were certain that their school is a member of the Alliance, mean scores for all questions under this factor were higher than last year. Reliability (internal consistency estimate) for Factor 4 (Qs 16-21 inclusive) is high: Cronbach's Alpha ($α$) is 0.888 (Year One Factor 4 $α$ = 0.936).

Understanding of the aims and functions of the Alliance was rated as quite or very high by 32.3%, and 38% reported some understanding (Q16: mean = 3.04, SD = 1.009), whereas the Year One mean score was 2.66 and 24.9% rated their understanding as quite or very high. *Support for the aims and functions* of the Alliance showed the greatest change from Year One to Year Two, with 52.4% rating it as quite or very high and 35.5% giving some support in Year Two (Q17: mean = 3.52, SD = 0.984), compared to 30.6% and 40.8% respectively and a mean score of 3.04 in Year One. The median score for this variable rose from 3 to 4. Changes in understanding of the *benefits of Alliance membership* were positive compared to Year One, though not as high as for Qs 16 and 17; however, the mode score given for understanding of benefits to schools (Q18: mean = 2.96, SD = 1.008), to pupils (Q19: mean = 2.84, SD = 0.989) and to individual respondents professionally (Q20: mean = 2.83, SD = 1.065) remained at 3 (neutral).

Willingness to engage in Alliance-generated activities rose in line with this factor's other variables: 37.8% of respondents reported that they were quite or very likely, and 45.4% were fairly likely, to take part (Q21: mean = 3.22, SD = 0.918), an aggregate gain of just under nine percentage points compared to last year.

The second year of the Alliance thus saw a slight improvement in classroom staff attitudes to its purposes and functions, particularly in terms of support in principle, although the most common response was still non-committal and understanding was limited. Interview evidence supported this deduction: no school in the sample gave significantly more information to classroom staff about the Alliance compared to Year One, and interviewees overwhelmingly believed that their colleagues remained ignorant of what the Alliance is and does. Confusion of the Alliance with other forms of between-schools working persisted, with pre-existing partnerships continuing to be regarded as the first-choice source of collaborative development activity by staff in schools which belong to them.

This finding can be triangulated against data gathered under a new question in the Year Two iteration (Q30), introduced as a result of the confusion evident in Year One data between

different types of collaboration, which asked respondents to rank five ways of schools working together in order of importance to them. Not surprisingly given that none of the sample schools belonged to an *Academy chain or trust* in Year Two, this form of partnership was ranked lowest overall (Q30.1: mean rank = 3.56, SD = 1.464), followed by *Federation* (Q30.2: mean rank = 3.34, SD = 1.440). *Two-school improvement partnership* was ranked third highest (Q30.4: mean rank = 3.10, SD = 1.233), while *Multi-school improvement partnership* (Q30.3: mean rank = 2.49, SD = 1.207) and *Teaching school alliance* were close together at the top (Q30.5: mean rank = 2.41, SD = 1.233). This finding contradicts the observation made above that classroom staff took a mostly non-committal view of the Alliance's activities, although it may reflect the greater degree of support in principle revealed in Q17. It may further be the case that some respondents conflated the different examples of multi-school grouping that they might know about when answering this question. Individual analysis of each school's responses shows that particularly high value was placed on the multi-school improvement partnership type by staff in schools that belong to that partnership, but that respondents in schools that do not belong to it also ranked this type of collaboration highest. An unexpected finding was that staff in schools which belong to a federation did not rank this type of collaboration any higher than respondents who did not work in a federation school. This contradicts interview evidence from David and Martin, both subject leaders in formally federated schools, who gave that relationship as much importance as the multi-school improvement partnership in promoting collaboration between schools.

However, the reliability of Q30's results is open to doubt, as the comparatively large standard deviations for each element suggest. The number of full or partial answers to the question (226) was significantly smaller than the total number of respondents (351); and those who did respond may have been uncertain in their answers because the question wording did not explain what each of the terms means. In addition, not every sample school had experience of each type of collaborative working. This question was excluded from factorial analysis because its ranking scale (1 = highest to 5 = lowest) is different from the Likert scale (5 = highest to 1 = lowest) used in the majority of questions.

In terms of innovation diffusion theory, the 'reach' of the Alliance (the proportion of the target audience that is aware of the innovation) improved somewhat compared to Year One but continued to be modest overall. This inference is partly supported by evidence of discussion of professional development in respondents' social group contacts (Q28 and Q29). Inside their own schools, 56.5% of respondents reported having talked about development quite a lot or very much, and 25.7% report some discussion; the median score was 4 (Q28: mean = 3.59, SD = 1.124). Outside their own schools, however, only 21.0% scored this variable as 4 or 5, and 35.3% scored it as 1 ('not at all'); the median score was 2 (Q29: mean = 2.36, SD = 1.280). These figures might be interpreted as showing that a majority of classroom staff

discussed professional development within their normal working boundaries, possibly spontaneously and sometimes in negative terms as John (a senior leader) suggested, but that such discussion did not often extend beyond their own school walls. This could be seen as a barrier to between-schools collaboration caused by a lack of social group contacts beyond one's own staff room. The importance of personal contacts in encouraging participation in Alliance-generated activities is investigated further under Factor 5 below.

4.3.8   Year Two questionnaire: Factor 5 (Classroom staff attitudes to Big 6 strands of Alliance activity, Questions 22 to 27)

The importance to classroom staff of the six strands of Alliance activity varied from strand to strand; the same distribution of scores was seen in Year Two as in Year One, although the proportion of higher-end responses was greater for each strand. Given the importance to many respondents of professional development in general (Q10) and of opportunities to access CPD (Q11 and Q13), it is not surprising that CPD was again the highest-rated strand with 82.1% of valid responses scoring it as quite or very important (Q22: mean = 4.09, SD = 0.759), compared to 76.3% in Year One. Close behind came initial teacher training (ITT) with 81.1% (Q23: mean = 4.11, SD = 0.802) compared to 72.6% in Year One, figures which probably reflect the continuing high visibility of training in the sample schools: all six mainstream schools belong to one of the two SCITT groups under the umbrella of the Alliance. Some way behind these strands, as in Year One, came school-to-school support (S2S) on 73.6% (Q26: mean = 3.93, SD = 0.786); and leadership development and succession planning (LSP) on 70.6% (Q24: mean = 3.87, SD = 0.774). Finally, development and deployment of specialist leaders of education (SLEs) was rated as quite or very important by 67.4% (Q27: mean = 3.80, SD = 0.830), and research and development (R&D) by 65.0% (Q25: mean = 3.77, SD = 0.836). Of the six strands, the rating of SLEs showed the greatest increase compared to Year One, rising from 55.6% and overtaking R&D. Reliability (internal consistency estimate) for Factor 5 (Qs 22-27 inclusive) is high: Cronbach's Alpha (α) is 0.885 (Year One Factor 5 α = 0.942).

Many teaching school alliances across the country seem to have prioritised ITT and CPD as this Alliance did, and so it was more likely that classroom staff had seen evidence of these activities than of the other strands. The higher perception rating of the SLEs strand may be attributable to the starting up of activity in that domain in Year Two. R&D continued to lag, due perhaps to no Alliance-generated, collaborative research activity being carried out yet. This led to some disappointment: Andy, a senior leader, said that in Year One he had assembled a small group of volunteers ready to undertake such work, but nothing had been forthcoming from the Alliance and the initial enthusiasm had been lost. Indeed, the motivation and energy needed to commit oneself to conducting independent educational

research seemed to be rare in sample schools; as in Factor 3 (staff attitudes to change – frequency), several interviewees identified lack of time, lack of funds and workload as being barriers in this regard. Christine reported a method of promoting research activity: making it school policy. Her school formed staff into practitioner enquiry teams and made completion of a collaborative research project part of their annual performance management review, an initiative that was largely welcomed by her colleagues.

Attitude data under this factor can be triangulated against attendance data for Alliance-generated professional development events aimed at serving classroom staff (excluding NQTs for whom separate provision was made). Compared to Year One, significantly more events were staged in Year Two. A summary of both years' activities is shown in Table 4.11 below:

Table 4.11:   Alliance-generated professional development activities for classroom staff

Activity	Year One		Year Two	
	Sessions in year	Attendees per session	Sessions in year	Attendees per session
Middle leadership	6 in 2 courses	25 + 28	6 in 2 courses	28 + 47
Assistant headship	6 in 2 courses	21 + 18	6	22
Deputy headship	6	8	*not planned*	
Primary middle ldrshp	*not planned*		?	28
Drama network	1	14	3	15, 24, 8
Media network	*not planned*		3	5, 7, 7
Primary ICT	1	55	*not planned*	
Literacy	*not planned*		3 planned but cancelled due to low nos.	
GCSE English	*not planned*		1	40
Subject liaison meetings:				
Art	*not planned*		2	17, 15
Computing	*not planned*		1	4
Design Technology	*not planned*		1	7
English	*not planned*		1	6
Geography	*not planned*		1	5
History	cancelled by provider		1	2
Mathematics	*not planned*		?	?
Mod Foreign Langs	*not planned*		1	9
Religious Education	*not planned*		cancelled due to low nos.	
Science	*not planned*		1	5

The table above shows that, in both Year One and Year Two, attendance rates varied depending on the type of event offered and audience targeted. The best-attended activities

appeared to be those which offered opportunities not available elsewhere, including leadership preparation courses provided by an external contractor; workshop series run by recognised external experts; and a one-off 'Outstanding English at GCSE' session run by an exam board which attracted attendance from beyond the Alliance's area. Bringing in external experts also accounted in part for the popularity of the Art subject liaison meetings, although an important additional factor here was the energy and charisma deployed by the Alliance's subject co-ordinator for Art who contacted potential attendees directly to encourage engagement and remind them of the sessions. It was also suggested by interviewees that many Art departments are small and possibly isolated within their own schools (perhaps Drama is similar in this regard), and so the motivation to meet like-minded colleagues from other schools is greater than it might be in larger subject departments. Lack of enthusiasm for the three between-schools subject liaison meetings envisaged by Alliance leaders was seen in most of the other subject areas. Meetings were quite often cancelled due to low numbers booking. Interviewees identified barriers to attendance as lack of time (in-school meetings took up available time); timings of liaison meetings ('twilight' was felt to be difficult); lack of clear purpose or gain; duplication by other providers including a local multi-school improvement partnership; lack of or late publicity; and geographical separation.

4.3.9 Inferences from Year Two questionnaire

Analysis of questionnaire data (QUAN), both by individual variable and by factor, supported by cross-reference to relevant interview data (QUAL), led me to make the following inferences about classroom staff attitudes to the influence of the Teaching School Alliance on their professional development:

1. A **gap between aspiration and practical reality** in terms of professional development was confirmed by the second iteration of the questionnaire. The issue of **agency** in professional development, here interpreted as 'heterarchical', learner-centred development activity, continues to be problematic in the current educational environment of high-stakes accountability. There appeared to be a substantial appetite for agential professional development, including collaborative work, amongst classroom staff that was not being met within schools.

2. Knowledge and understanding of the **Teaching School Alliance** was rated higher than in Year One, but continued to be limited overall. When compared to other types of between-schools working, the teaching school alliance type was ranked highly

along with the multi-school improvement partnership type; but the high ranking of the teaching school alliance may be the result of confusion between these two types.

3. In comparing **CPD strand** activities generated by the Alliance in its first two years of operations, an observable increase in 'reach' could be claimed in that the wider range of professional development activities in Year Two attracted more attendees than in Year One. However, 'significance' remained an issue for Alliance leaders to consider: the most successful events in both years offered something that could not be found elsewhere, while events which seemed to duplicate provision or were thought to lack relevance to perceived needs struggled to attract participants.

These inferences were tested during follow-up Year Two interviews, in which I used a structured interview format similar to that used in Year One in order to focus on key issues that the questionnaire raised. However, I again ensured that there was space for interviewees to mention issues that they considered important, even if I had not asked directly about them. The findings of Year Two interviews are presented in the following section.

4.3.10 <u>Year Two interviews sample</u>

Interviewees were again drawn from self-selecting volunteers in sample schools who expressed interest in taking further part in my research project by providing a contact email address on their questionnaire form. In the Year Two iteration of the survey, there were 31 such volunteers. I contacted each of them to seek their agreement to an interview to follow up my questionnaire findings: 14 people replied positively to this invitation. Due to the later issue of the questionnaire in Year Two (in April, rather than in January in Year One) and the substantial amount of time needed to analyse the data that it produced, I decided to conduct interviews in the summer term. By allocating a longer period to the interview phase and being more flexible with scheduling, but also accepting a less representative sample, I was able to arrange and conduct Year Two Interviews with 11 volunteers, three of whom I had interviewed in Year One. I also conducted a second, semi-structured interview on practices in professional development with one of the interviewees who had expressed an interest in the issue. Interviews were conducted between 19 June and 17 July 2015. Anonymised details of the interview sample are shown in Table 4.12 below:

Table 4.12:   Year Two interviews sample

Pseudonym	Length of service	Job description	School type	Interviewed in Year One?
Structured interviews to follow up questionnaire findings:				
Amelie	early career	classroom assistant	3-19 special	no
Andy	long service	senior leader	11-18 +sixth form	no
Christine	mid-career	subject leader	11-18 +sixth form	no
Dave	mid-career	subject leader	11-16 rural	no
David	long service	subject leader	11-16 town	yes
Elizabeth	mid-career	classroom teacher	3-19 special	yes
John	mid-career	senior leader	11-18 rural	no
Julia	long service	senior leader	11-16 town	yes
Louise	mid-career	subject leader	11-16 rural	no
Martin	mid-career	subject leader	11-16 town	no
Sarah	mid-career	subject leader	11-18 +sixth form	no
Semi-structured interview on practices in classroom staff professional development:				
Louise	mid-career	subject leader	11-16 rural	no

The table above shows anonymised details of the interviewees who agreed to take part in Year Two interviews, which form the second strand of data (QUAL) in my multi-strand, sequential research design, following on from the first strand collected by questionnaire (QUAN). The large number of subject leaders (seven out of eleven interviewees) relative to their representation on school staffs might be seen as a distortion of the sample. Their positive response to my request for an interview might be explained by their role responsibility for leading professional development among departmental colleagues, and perhaps by a greater level of interest in looking beyond their own school compared to their colleagues. As in Year One, classroom staff who felt that they knew little about the Teaching School Alliance (as was shown to be likely by questionnaire data) may have been less willing to be interviewed if they thought it would mean exposing perceived ignorance.

4.3.11 Year Two interviews data coding and analysis

Interviews were again recorded using a digital MP3 recorder and transcribed as soon as possible afterwards. Repeating the method I used for Year One data, I coded each interview transcript inductively in order to identify significant patterns and to sift out irrelevance and trivia. I checked these codes against the major categories that I developed in the Year One Interview phase and found a high level of agreement between the iterations:

- **Collaboration** – importance and frequency of joint enterprise between individuals, between teams and between schools
- **Professional Development** – staff attitudes, school expectations and activities
- **Teaching School Alliance** – staff attitudes
- **Obstacles** to effectiveness of the three elements above

What each interviewee chose to mention within each major category again varied quite considerably, both between interviews in this iteration and between iterations. I found that I needed to develop additional sub-categories to analyse responses that covered new ground compared to Year One, and some sub-categories developed in Year One were not used in Year Two. Major categories and sub-categories are shown in Table 4.13 below, with both Year Two and Year One frequency figures.

I again tested the reliability of this qualitative data using the inter-rater method (Mays & Pope, 1995) by asking the same colleague whom I asked in Year One to code independently three of the Year Two interview transcripts. The percentage agreement achieved between us for major category coding (four categories) was again over 90% ('almost perfect' agreement between raters (McHugh, 2012)). The percentage agreement for sub-categories within each major category (ranging from five to thirteen sub-categories per major category) was lower at around 75% ('substantial agreement').

I compared data segments to these sub-categories to check for relevance, and I compared each data segment to other segments in the same sub-category to make validating cross-references within each interview and between interviews. In order to reduce the volume of material that I had to analyse, I rank ordered items within each major category by the number of interviews in which the sub-category was mentioned, and gave most time to the most commonly mentioned items. However, I did not ignore outliers amongst the sub-categories, and I was again able to find useful and relevant material mentioned by only one or two interviewees. I exercised the same caution about generalising from a small number of responses. Each major category is discussed in detail in the following sections.

Table 4.13: Year Two interviews   -   coding categories

Major category	Sub-category	Code	Interviews where mentioned Year Two (*n*=12)	*Year One (n=7)*
Collaboration	Attitude to	C-A	8	*4*
	For improvement	C-I	6	*5*
	Leadership of	C-L	6	*3*
	Sharing good practice	C-P	6	*3*
	For support	C-S	6	*2*
+	Via personal contacts	C-C	3	*0*
+	Geographical	C-G	3	*0*
	For advantage	C-AD	2	*2*
	Sharing resources	C-R	2	*2*
	Fluidity of	C-F	2	*1*
	Visiting other schools	C-V	2	*1*
Professional Development	Heterarchical planned	PD-HP	12	*6*
	Top-down/hierarchical	PD-TD	10	*7*
	Expectations	PD-E	6	*3*
	In-house provision	PD-I	5	*2*
	Personalised	PD-P	5	*5*
	Heterarchical spontaneous	PD-HS	3	*3*
Teaching School Alliance	Knowledge of	TSA-K	11	*7*
	Publicity for	TSA-P	8	*6*
	Activities	TSA-A	6	*2*
+	Effectiveness	TSA-E	1	*0*
	Response to feedback	TSA-F	0	*1*
Obstacles	Time	O-T	12	*7*
	Willingness/making effort	O-E	9	*3*
	Money/funding	O-M	8	*5*
	Need/relevance	O-N	8	*4*
	Other networks preferred	O-O	7	*3*
	Knowledge of opportunities	O-K	6	*3*
	Introspection	O-I	5	*4*
	Sustainability	O-S	5	*1*
	Competition between schools	O-C	3	*3*
	Micro-politics	O-P	3	*1*
	Workload	O-W	3	*1*
	University links	O-U	0	*3*
	Impact on own pupils	O-IP	0	*1*

+ *sub-category added in Year Two*

The table above shows the four major coding categories, and the varying number of sub-categories within each major category, that I developed during the data analysis phase. I present detailed findings under each major category in the following sections.

4.3.12 <u>Major category: Collaboration</u>

In Year Two interviews as in Year One, respondents felt positively about collaborative working (sub-category C-A). Again, this seemed be a particularly marked feature of how classroom staff in special schools work together:

> I think it's positive. I think we're very good as a staff working with our colleagues and I think this is supposed to be in a non-threatening way. [The Headteacher] made it clear, we don't send any feedback forms to senior management. [Elizabeth]

Some interviewees noted that collaboration was most evident inside their own schools and within team boundaries, rather than between schools:

> In the department, we collaborate quite a lot. In an informal way, we do it all the time. [Louise]

> I think it's very high. There's two aspects to that: there's more collaboration inside school, there's a lot, and that's across teams as well, it's not just within subject teams, it goes across that … I think a lot of staff, given the time, would be committed to external staff to staff support, but I think the limiting factor to that is the time to do that and the pressure teachers are under. [Andy]

> Most people can see the benefits of going out to other schools, or working collaboratively with other schools, but it's not there every day, is it? … There'll often be courses which perhaps don't target the kind of students that we're working with, and [colleagues] would like to have an opportunity to work with other departments and other schools that work with similar students and they have similar issues … but the problem is, there's always that competitive element as well. [Christine]

Julia reported "certainly more collaboration being done with all staff" in her school, a significant change from Year One to Year Two driven by a whole-school focus on literacy. However, Sarah and John both reported that, in their mainstream schools and unlike the case of special schools, classroom teaching assistants (without QTS) were not usually included in collaborative developmental work.

The chief reasons for working collaboratively were reported as: for improvement (sub-category C-I), to share good practice (sub-category C-P) and for support, particularly when facing unfamiliar demands such as a new subject specification (sub-category C-S). These reasons were also cited as important in Year One.

Two new sub-categories were added to this major category in order to account for fresh ideas raised by Year Two interviewees.   Three people mentioned the importance of using *personal contacts* to facilitate collaboration (sub-category C-C):

> Our deputy head is from Gallipoli School, used to work at Gallipoli, so you share ideas and knowledge, back and forth ... But I guess as the Alliance develops people will make those personal contacts, won't they? [Elizabeth]

> When people said they were coming to the course, I made sure that I responded to them personally to say, 'Oh, that's brilliant news, thank you, look forward to seeing you', making them think, 'OK, this'll be great', and be enthusiastic about being there to discuss whatever it is with you. [Christine]

Similarly, David and Martin had previously worked together in a subject team in one school, and now worked collaboratively as subject leaders in different schools.

The second sub-category added was *geographical* influence on collaboration (sub-category C-G). Dave, who works in a rural school, reported that close geographical proximity made collaborative work between schools more likely, citing the local multi-school improvement partnership as an example. Louise said, "Most people are willing if it's local", and Andy also mentioned this idea. Dave said that, conversely, "distance as much as anything does pose a problem," an obstacle also noted under sub-category O-E and discussed below.

4.3.13 Major category: Professional Development

As in Year One, interview responses in Year Two suggested that the focus of collaboration for development is usually the subject department or (in special schools) the small, classroom-based team, and activity is both formally planned (sub-category PD-HP) and spontaneous (sub-category PD-HS). Elizabeth, a mid-career classroom teacher in a special school, reported that an 'observation triad' programme for teachers had been set up by the Headteacher this year:

> As a more informal way on top of performance management but a more informal and supportive way of helping each other at grass roots level really ... Which I think is one of the

good things about it. In the sense that you can look at your own personal practice and identify - we've all got aspects that we'd like to improve all the time. [Elizabeth]

Also in her school, training events were targeted at all classroom staff; many were voluntary but attracted large audiences, and teachers and classroom assistants attended them together.

As in Year One, however, interviewees reported that the overwhelming majority of professional development activity in every sample school was directed by school leaders (sub-category PD-TD), usually in response to priorities identified in the school development plan, which was itself a response to the school's most recent Ofsted inspection judgement. Expectations placed by school leaders on classroom staff regarding their professional development (sub-category PD-E) were reported to be closely tied to improvement in classroom performance and thus to improved results for pupils:

> The position of the school exacerbates that … If the school was already a clear 'Good' school pushing towards 'Outstanding', yes it would be about re-evaluation [of practice] … I myself like change, I sort of want to jump off cliffs and take risks, but I find that I'm not able to because institutionally it's the old 'turning round the tanker' … I want to take the Ofsted shackles off. [Martin]

John said that working in a school where the hierarchical priority was a better inspection grade meant that "there has still been normal teaching and learning CPD, but it has felt like a lot of the pressure has been on getting the data right." Sarah said that she felt "lucky" in being permitted to initiate whole-staff development activities from her position "in the middle" as a subject leader.

There was noticeably more frequent mention in Year Two of in-house provision of professional development activities (sub-category PD-I), as opposed to classroom staff travelling to another site and/or using services external to the school. Within-school activity was most commonly organised either by subject leaders for their own teams or by a formally-designated 'Teaching & Learning Team' consisting of strong practitioners across the age and experience range, whose task was to research, design and present development events and opportunities to the whole staff:

> It is organised by two members of the leadership team and they do direct it because they go to all these different seminars about great learning and how to take learning forward. So they're the ones with the ideas … They have these ideas of what they want to do, so have an

over-arching aim and then look at what the teachers are doing and then they play to those strengths. So say [name] would do such and such because that's his key strength. So [name] introduced us all to Kahoot last year. [John]

David expressed concern that the tendency he observed towards within-school development activity might be "incestuous" and "inward-looking", such that "the broadest picture is not being looked at."

4.3.14 Major category: Teaching School Alliance

As found in questionnaire data analysed under Questionnaire Factor 4 (see section 4.3.7 above), the second year of the Alliance saw a slight improvement in classroom staff's attitudes to its purposes and functions, particularly in terms of support in principle, although the most common response was still non-committal and understanding was limited. Interview evidence supports this deduction: no school in the sample received significantly more information about the Alliance compared to Year One, and interviewees overwhelmingly believed that their colleagues remained ignorant of what the Alliance is and does (sub-category TSA-K). Inadequate publicity about Alliance-generated events was raised by several interviewees (sub-category TSA-P):

> What has tended to happen, and I'm not sure if this fault is in the Alliance, or in the school or in me, or in all three, I don't know, [it] is kind of very late in the day. [Dave]

This comment raises the possibility that school professional development co-ordinators with whom the Alliance was in contact did not pass on information about Alliance-generated events in a timely manner, an inference supported by Andy's comment that "We could do a lot better. Staff are so busy that it goes in one ear and out the other." Louise said that she had joined her school as a subject leader at the start of the academic year and she was now a member of the whole-school Teaching & Learning Team, but "in no way has it been mentioned to me since I've been here, I don't think."

The greater number of Alliance-generated activities found under Questionnaire Factor 5 (see section 4.3.8 above) did not make an impression on most interviewees: only one claimed to have attended an Alliance event (Christine), and one was not sure whether the event attended should be credited to the Alliance or to the local multi-school improvement partnership (Dave). Martin said that the aims and style of the subject liaison meetings did not seem worth his attention: "just going to another school to talk is not attractive". I

understood this perception of the Alliance's work to be asking what might be gained from attendance at an event, which seemed to me to be different from considering what the range of Alliance activities might be (sub-category TSA-A), and I therefore coded it into a new sub-category of *effectiveness* (TSA-E). However, Andy reported:

> We've got several people doing the leadership courses, we've got staff attending a lot of the subject leader meetings, probably slightly less this year than last year … The impact of that has been felt in several teams within the school, and a lot of that is very positive. [Andy]

Regarding the range of Alliance activities (sub-category TSA-A), Louise suggested in her second interview on practices in professional development that a useful role for a teaching school alliance could be to facilitate classroom staff's access to educational research literature, possibly by providing "digestible key readings" and a location in which to discuss them with others. Julia and John, both senior pastoral leaders, were disappointed by the absence of pastorally-focused events in Alliance provision; John praised a collaborative group for heads of sixth form hosted by the county council's Standards and Excellence Team. Amelie, a special school classroom assistant, said:

> I can't think of many situations where we could get much that we're not – because we're already generating a lot in house, we have specialists … We would be interested in giving training to other schools to help in dealing with issues that we know we're confident in dealing with. [Amelie]

This desire to provide professional development opportunities to mainstream schools was also mentioned in Year One by interviewees working in a special school.

4.3.15 Major category: Obstacles

Time was again the obstacle to engaging both in collaborative work and in Alliance-generated professional development activity (sub-category O-T) mentioned by every interviewee. Perceived relevance to individual needs (sub-category O-N) was also mentioned frequently as an important barrier to attending Alliance-generated events. In her second interview on practices in professional development, Louise offered the counter-argument that, while classroom staff often cited lack of time and lack of funding (sub-category O-M) as obstacles to engaging in collaborative professional development, "teachers aren't very good at managing time." She said that she achieved much of her professional development in the *heterarchical spontaneous* domain (sub-category PD-HS) via free online

sources such as Twitter, blogs and open-access research literature, and she was willing to attend in her free time low-cost conference-style events such as *researchED* and TeachMeets (sub-category O-E). However, other interviewees suggested that few of their colleagues would be willing to make a similar level of effort in pursuing their own professional development:

> I think there is a real conflict. Some staff want agency but don't want the responsibility that comes with that agency or the accountability that comes with that agency. Or sometimes to put in the work that that agency requires. I think there is a really big clash there. [Dave]

> It's largely attitudinal. Then you're talking about things like apathy, indifference, 'Do I have time for it? Will it help?' Although it's crude, 'Can I be bothered?' Particularly in the current context, because a lot of teachers will just see it as, 'Oh, that's something else I've got to do,' rather than seeing it as a benefit for them in their teaching. [Martin]

The influence of other collaborative partnerships (sub-category O-O) persisted into Year Two. This phenomenon was compounded by the designation in 2014 of two further teaching schools in the local area, which were thought likely to form partnerships with local schools which were also members of the original Alliance. Perhaps as a result, more interviewees raised micro-politics (sub-category O-P) as an obstacle to between-schools collaboration than in Year One:

> I think quite often senior staff very much want their pet projects, their particular thing to be the thing that's broadcast around, and if there is a conflict often what will happen is that they say, 'We're not going to do that, we're going to do our own thing because our thing's better.' [David]

Concern was raised about the sustainability of professional development activity (sub-category O-S) when time was not allocated to following individual or personalised paths of professional development (sub-category PD-P):

> Outside of the twilights [activities directed by school leaders] I don't think there is ever staff choosing to do PD. If you get a leaflet in your pigeon-hole, from an agency or with a course on it, then you can apply to go on it, but they're rare, and as positive as a lot of staff are coming back from those courses, nothing is really done with it beyond that … As much as staff would like to reflect on their own practice, there's not the forum for that outside of our dedicated time for it, which is formally structured. [Sarah]

This view echoes the common experience of professional development activity in many of my sample schools, as discussed above in section 4.3.13.

4.3.16 <u>Inferences from Year Two interviews</u>

Analysis of Year Two interview data, and comparison of my findings with those drawn from my Year Two questionnaire data and from the Year One iteration of my survey, led me to make the following inferences relevant to my over-arching research question:

1. Classroom staff uniformly reported that their **schools direct their professional development** in order to meet school-level priorities. Opportunities to pursue individual needs and interests were consequently rare. This inference echoes similar findings from the Year One survey.

2. There was widespread **willingness to engage in collaborative developmental work**. This was mostly limited to collaboration within an individual's immediate working team, although there was some evidence of an increase in such work at school level. This inference also supports a similar one drawn from the Year One survey.

3. **Knowledge of the Teaching School Alliance** in the second year of operations was still thin, with little sense among classroom staff of how the Alliance might aid their professional development: this echoes Year One survey findings. Classroom staff continued to think of **other, pre-existing partnerships** when they thought of between-schools development work, and micro-politics played a part in that perception.

4. The chief obstacle to engaging in collaborative development work of any kind was again reported as the **lack of time** available to classroom staff, and there was evidence of **lack of willingness** to spend free time on such activity. Other important obstacles included **lack of funding**, and a tendency to **introspection** at both school and individual levels which negatively influenced the **perceived relevance** of professional development activities offered by the Alliance. These findings add to my understanding of why, in both iterations of my questionnaire, classroom staff reported a gap between aspiration and practical reality in their professional development.

I have thus been able to use the second strand (QUAL: interviews) of my mixed-methods, multi-strand, research design to confirm inferences from the first strand (QUAN: questionnaire), and to further add to my understanding of how and why the teaching school innovation over its first two years spread or did not spread within my sample population. In the next section I discuss combined inferences drawn from the second iteration of my sequential QUAN → QUAL research design.

4.3.17 Combined inferences from Year Two survey

Taking questionnaire (QUAN) and interview (QUAL) findings together, I am able to make the following combined inferences:

1. In terms of **innovation diffusion theory**, the 'reach' of the teaching schools innovation amongst my sample population showed marginal improvement from Year One to Year Two. Few respondents claimed knowledge of the innovation, and there was widespread confusion of it with other between-school partnerships. The 'significance' of the teaching school innovation to classroom staff in my sample remained poor in Year Two. While supportive of the innovation in principle, classroom staff did not appear to believe that most Alliance-generated activities would be able to help them in their professional development, the exception being opportunities that could not be found elsewhere.

2. The problematic issue of a widespread but unsatisfied appetite for **agency** in classroom staff's professional development, raised by responses to the Year One questionnaire, was further explored in questions that distinguished between hierarchical and heterarchical forms of professional development in the second iteration of the questionnaire. By choosing to sacrifice validity of direct comparison between iterations, I was able to probe this issue in more detail in Year Two.

3. The influence of **other between-schools partnerships** on attitudes to the Alliance was addressed in the second iteration of my questionnaire, but the additional questions failed to distinguish sufficiently between different types of between-schools partnership that may have been unfamiliar to respondents. I therefore decided to add brief explanations of each type to the questionnaire's third iteration.

4. The gathering of **attendance figures** for the various Alliance-generated events taking place each year, in order to triangulate both questionnaire and interview findings

about attitudes to the Alliance and willingness to engage in its activities, proved useful to my analysis. I therefore planned to continue this data strand in my Year Three survey.

In the next section, I present findings from the third and final iteration of my multi-strand, sequential, mixed-methods research design.

4.4 Year Three

4.4.1 Year Three questionnaire sample: response rates and reliability

In total, 696 questionnaires aimed at classroom staff were distributed to the eight schools in my collective case sample in June 2016. 150 questionnaires were returned fully or partially completed, giving an overall response rate of 22%. Individual school response rates are shown in Table 4.14 below.

Reliability (internal consistency estimate) for the third questionnaire is high with Cronbach's Alpha ($α$) for the variables in an ordinal scale (Qs 6-27 inclusive) showing 0.861. This figure lies between the scores for Year One at 0.908 and Year Two at 0.826. This may be due to the smaller sample size, including a higher proportion of people familiar with the survey, compared to Year Two. The smaller sample size may affect the overall reliability of the questionnaire, and the very low return by four of the eight schools means that their data cannot be used for between-schools comparison with confidence.

Table 4.14:   Year Three questionnaire response rates (June 2016)

School	Category	Qs out	Qs in	Year Three Response %	Year Two %	Year One %
Albuhera High School	11-18 +sixth form	103[1]	40	39%	80%[1]	40% [1]
Charleston High School	11-18 +sixth form	59	8	14%	42%	37%
Dettingen School	3-19 special	85	41	48%	74%	24%
Gallipoli School	3-19 special	95	19	20%	50%	45%
Lucknow High School	11-16 rural	63	4	6%	76%	51%
Minden High School	11-18 rural	83	8	10%	29%	80% [2]
Normandy High School	11-16 town	122	21	17%	27%	21%
St Lucia High School	11-16 town	86	9	11%	35%	7%
Total		**696**	**150**	**22%**	**51%**	**33%**

Notes: [1] *figure is for teachers only and excludes TAs, who were not issued questionnaires*
[2] *focus group of 25 teachers agreed with Headteacher for testing of questionnaire*

The table above shows Year Three questionnaire response rates by school, with Year One and Year Two figures shown for comparison. The overall figure for response rate compares poorly with the response rates obtained for previous iterations of the survey (Year One in January 2014 = 33%; Year Two in April 2015 = 51%). Reasons for this decline might include the later date of issue which came after public exams had started. Staff working patterns

may have changed as exam classes either went on study leave or were given extra revision lessons, so that time available to complete the questionnaire was reduced or disappeared. As in the previous iterations, direct contact to elicit their support was made with 'gatekeepers' (Headteachers or other responsible senior leaders) before delivering the questionnaires, but it may be that a third questionnaire on the same topic failed to raise much interest among staff. However, a good level of loyalty was evident in that 102 respondents (68%) to the Year Three version had also responded to at least one of the previous iterations. This compares favourably to Year Two, where 37% of respondents had also answered in Year One. The same schools were used as for the previous iterations in order to maintain sample consistency at school level.

4.4.2   Year Three questionnaire: Demographic characteristics of respondents (Qs 1-5)

Of the 150 respondents to the Year Three questionnaire, 39 (26%) were male and 110 (74%) female; one person declined to answer this question. The average reported length of service was 10.9 years. In comparison, the Year One figures were 31% male, 69% female and 12.2 years; the Year Two figures were 29% male, 71% female and 10.8 years. For the Year Three survey, 8 respondents (5%) were NQTs or new teaching assistants, and a further 18 (12%) were in the second or third years of their careers; 26 (17.5%) had 20 or more years of service. Of the 95 respondents with degree-level qualifications, 20 had either a masters or a doctorate. Qualified teachers reported a similar range of routes into teaching as in previous years: 12 took a BEd or BA+QTS, 3 a CertEd, 34 a PGCE, 26 entered via SCITT, 12 via GTP and 2 via School Direct. Some SCITT entrants also gained a PGCE and were counted under the latter category. These figures are all close to those gathered in the first two iterations of the questionnaire. Of the 50 people who reported not having QTS, 39 were working as classroom assistants. 'Other' routes into education were reported by 11 people, and 10 did not answer this question. The sample thus appears to have remained remarkably consistent in demographic terms over the three iterations of the questionnaire, even though the particular composition of each cohort changed from year to year. This leads me to have confidence in the validity of the questionnaire data in terms of comparing whole iterations, even if very low returns mean that some schools must be excluded from between-schools comparison.

4.4.3   Year Three questionnaire descriptive statistics

Descriptive statistics for all valid responses (*n* = 150) to the Year Three Questionnaire are shown in Table 4.15 below:

Table 4.15: Year Three questionnaire - descriptive statistics

Q no.	Variable description	Year Three Mean	Median	SD	Year Two Mean	SD	Year One Mean	SD
6	School support for teacher development	3.88	4	0.818	3.91	0.806	4.16	0.743
7	Effectiveness of teacher development	3.68	4	0.820	3.68	0.780	3.92	0.725
8	School support for teacher collaboration	3.95	4	0.812	3.92	1.857	3.98	0.785
9	Effectiveness of teacher collaboration	3.72	4	0.866	3.64	0.877	3.80	0.829
10	Importance of improving practice	4.75	5	0.505	4.73	0.535	4.73	0.556
11	Importance of hierarchical CPD	4.06	4	0.876	4.21	0.815	4.64	0.643
12	Frequency of hierarchical CPD	3.83	4	1.043	3.70	1.077	3.99	0.992
13	Importance of heterarchical CPD	4.13	4	0.761	4.25	0.812	4.24	0.679
14	Frequency of heterarchical CPD (planned)	2.84	3	1.215	2.98	1.210	Q changed	
15	Frequency of heterarchical CPD (unplanned)	2.69	3	1.113	2.83	1.144	Q changed	
16	Understand alliance's aims	3.00	3	1.065	3.04	1.009	2.66	1.157
17	Support alliance's aims	3.32	3	1.085	3.52	0.984	3.04	1.051
18	Benefits of membership to school	2.80	3	0.987	2.96	1.008	2.77	1.112
19	Benefits of membership to pupils	2.54	3	0.986	2.84	0.989	2.62	1.006
20	Benefits of membership to oneself	2.67	3	1.024	2.83	1.065	2.63	1.049
21	Willingness to take part	2.88	3	1.050	3.22	0.918	2.99	1.105
22	Perception of CPD strand	4.06	4	0.947	4.09	0.758	4.02	0.963
23	Perception of ITT strand	4.22	4	0.846	4.11	0.801	3.97	0.984
24	Perception of LSP strand	3.79	4	0.982	3.86	0.774	3.73	0.938
25	Perception of R&D strand	3.74	4	1.048	3.77	0.836	3.64	0.992
26	Perception of S2S strand	3.82	4	0.939	3.94	0.786	3.79	0.927
27	Perception of SLEs strand	3.72	4	1.063	3.80	0.830	3.55	0.959
28	Discuss prof development – own school	3.37	3	1.180	3.60	1.124	Q changed	
29	Discuss prof development – another school	2.12	2	1.187	2.35	1.280	Q changed	
30	Rank order of between-schools collaboration models:						Q added	
	a. Academy chain / trust	3.97	5	1.376	3.55	1.464		
	b. Federation	3.20	4	1.186	3.35	1.440		
	c. Multi-school improvement partnership	2.09	2	1.273	2.48	1.207		
	d. Two-school improvement partnership	2.76	3	1.215	3.09	1.233		
	e. Teaching school alliance	2.83	3	1.335	2.41	1.343		

* 1 = not at all, 2 = not much, 3 = some/fairly, 4 = quite a lot, 5 = very much

The table above shows the mean score (on a scale from 1 to 5), the median score and the standard deviation for each variable which is on an ordinal scale. It appears that mean scores vary quite widely from 2.12 (Q29) to 4.75 (Q10), with higher means mostly found in variables dealing with professional development, and lower means mostly found in variables dealing with the aims and benefits of a teaching school alliance. These observations mirror those made for the Year One and Year Two questionnaires (see sections 4.2.3 and 4.3.3 above). Mean and standard deviation figures for the Year One and Year Two questionnaires are shown for comparison.

4.4.4   Year Three questionnaire factorial structure

The data gathered by the Year Three questionnaire were subjected to principal component analysis using varimax rotation, as were previous iterations, which confirmed the factorial structure of the questionnaire as consisting of the same five main factors as for the Year One and Year Two iterations. Reliability (internal consistency estimate) for these factors was again calculated using Cronbach's Alpha (α) and scores are shown in Table 4.16 below:

Table 4.16: Year Three questionnaire - factorial structure of all variables

Factor	Name (Questions)	α	Mean	Median	SD	Responses (n=150)	% of n
1	School-level support for change (Qs 6, 7, 8, 9)	0.826	3.81	4	0.837	145	96.7
2	Classroom staff attitudes to change: importance of change (Qs 10, 11, 13)	0.274	4.31	4	0.791	143	95.3
3	Classroom staff attitudes to change: frequency of change activity (Qs 12, 14, 15)	0.677	3.10	3	1.231	137	91.3
4	Classroom staff attitudes to Alliance (Qs 16, 17, 18, 19, 20, 21)	0.905	2.91	3	1.060	140	93.3
5	Classroom staff attitudes to Big 6 strands (Qs 22, 23, 24, 25, 26, 27)	0.902	3.89	4	0.987	137	91.3
All	*Ordinal variables (Qs 6-27 inclusive)*	*0.861*				*122*	*81.3*

The table above shows that the reliability (internal consistency estimate) of Factor 1 in Year Three is higher than in Year Two: Cronbach's Alpha (*α*) for Year Three Factor 1 (Qs 6 to 9) is strong at 0.826, which compares well to Year Two Factor 1's moderate *α* of 0.594 and lies in the same range as Year One Factor 1's *α* of 0.839.

My explanation for the low Year Two *α* suggested that non-QTS staff in that sample may have been less well-informed than qualified teachers about professional development opportunities, or less confident in taking them up. However, the proportion of respondents in Year Three who are qualified teachers was lower than in Year Two (59.7% in Year Three compared to 62.4% in Year Two) but the Year Three *α* is significantly better, which contradicts that hypothesis. The comparatively low *α* of Factor 1 in the Year Two iteration might thus be simply a statistical anomaly, given that each iteration's sample contains different, self-selecting respondents. Alternatively, it may be that in Year Three some non-QTS respondents now felt well informed about professional development: this was certainly the case at Dettingen School, where Elizabeth reported that class teachers and 'co-educators' (non-QTS classroom support staff) had been working more closely together on development activities than in previous years.

The table above also shows that reliability (internal consistency estimate) scores for Year Three Factors 2 and 3 are significantly lower than for Factor 1: *α* for Qs 10, 11 and 13 together (Factor 2, importance of change) is 0.274 (Year Two = 0.468), and for Qs 12, 14 and 15 together (Factor 3, frequency of change) is 0.677 (Year Two = 0.661).

The internal consistency (*α*) of Factor 2 in the Year Three questionnaire data is particularly weak at 0.274, and is markedly lower than the moderate *α* score of this factor in Year Two. This phenomenon led me to experiment with omitting each question in the factor in turn, as I did with Factor 2 in the Year One iteration (see section 4.3.4) and with Factors 1 and 2 in Year Two (see section 4.4.4). The figures for these combinations of questions are shown in table 4.17 below:

Table 4.17: Year Three questionnaire - bivariate correlations of selected variables

Factor	Name (Questions)	Pearson's r	Mean	Median	SD	Responses (*n* = 150)	% of *n*
2	Classroom staff attitudes to change: Importance of change						
	Qs 10, 11 only	0.223	4.41	5	0.789	145	96.7
	Qs 10, 13 only	0.297	4.44	5	0.714	147	98.0
	Qs 11, 13 only	- 0.042	4.09	4	0.818	143	95.3
	[Qs 10, 11, 13 all	*α = 0.274*	*4.31*	*4*	*0.791*	*143*	*95.3]*

Omitting a question from Factor 2, which contains three questions in total, means that the remaining two variables must be analysed using bivariate correlation (Pearson's r) rather than Cronbach's Alpha (*α*). Omission of any individual question, as shown in Table 4.19 above, produces only weak correlation scores for Factor 2, and indeed the omission of Q10 ('importance of improving practice') produces a very weak correlation. Omitting non-QTS staff and considering qualified teachers only does not have any effect on reliability scores, unlike a similar treatment of the factorial structure in Year Two. My explanation for this outcome is that, as in Years One and Two, respondents were not entirely confident in distinguishing between top-down (hierarchical) and agential (heterarchical) development activity. The repetition of this finding in all three iterations of the survey suggests that classroom staff continued to struggle with the notion of self-selected, agential professional development, a deduction that is supported by interview evidence discussed in the relevant sections below.

4.4.5   Year Three questionnaire findings: Factor 1 (School-level support for change, Questions 6 to 9)

The wording and order of questions for this factor remained exactly the same as for the Year One and Year Two questionnaires, so it is possible to make direct comparisons between the iterations with some degree of confidence. The same relationship between the perceived level of support and the effectiveness of that support, that is, a gap between aspiration and reality, was observed in Year Three as it was in the previous iterations. It was again the case in Year Three that a significant majority of respondents felt that their schools encourage and support professional development 'quite a lot' or 'very much' (Q6: mean score = 3.88 out of 5, SD = 0.818) and the median score was again 4, but the percentage of 4s and 5s taken together fell to 68.0% (85.2% in Year One and 73.9% in Year Two). The *effectiveness* of such support was, as in previous years, rated lower with 61.7% scoring it quite or very highly (73.3% in Year One and 63.1% in Year Two) (Q7: mean = 3.68, SD = 0.820). Similarly, the level of school support for classroom staff collaboration was rated quite or very highly by 73.9% (77.2% in Year One and 67.2% in Year Two) (Q8: mean = 3.95, SD = 0.812) and the *effectiveness* of collaboration was rated quite or very highly by 65.3% (67.2% in Year One and 60.0% in Year Two) (Q9: mean = 3.72, SD = 0.866). It appears that in Year Three staff attitudes to collaboration for professional development improved compared to Year Two, but did not return to the levels of Year One. In Year Three, Qs 6, 7 and 9 all showed more respondents rating the variable as 'some/fairly' (score = 3) than as 'very much' (score = 5); in Year One this was true only of Q9, while in Year Two Qs 7, 8 and 9 showed this feature. I interpret this to suggest that classroom staff's overall confidence in their school's support for

change dropped after Year One, perhaps due as some interviewees said to a lack of professional development activity that staff valued.

4.4.6 Year Three questionnaire: Factors 2 and 3 (Classroom staff attitudes to importance and of frequency of change, Questions 10 to 15)

In the second iteration of the questionnaire, some questions under these factors were reworded or, in one case, replaced in order to focus more precisely on the issue of agency which emerged as problematic in the first iteration. These changes were retained for the third iteration. Direct comparisons between the first version and the two subsequent versions of the questionnaire for these factors are thus less certain than for the other factors where questions remained the same. On the other hand, using my project's conceptual model to separate domains of CPD activity into *'hierarchical'* (top down, school-directed, done to staff); *'heterarchical disciplined'* (chosen by individual, planned, learner-centred); and *'heterarchical undisciplined'* (spontaneous, mutual, teacher-led), I was better able to identify the types of development activity that respondents were thinking of as they answered this section of the questionnaire.

One thing that has not changed between the three iterations of the survey is the gap between aspiration and practical experience in classroom staff attitudes to change, which mirrors that found under Factor 1 (school level support for change). In the Year Three version, the *importance* of developing professional practice was rated quite or very highly in 97.3% of valid responses (Q10: mean = 4.75, SD = 0.505), almost exactly the same proportion as in the previous two versions where exactly the same question was asked. The two following questions on importance of change were reworded in Year Two to distinguish between hierarchical, school-directed professional development activity (Q11) and heterarchical professional development activity chosen by the individual (Q13). The *importance* of taking part in school-directed CPD was rated quite or very highly by 75.4% of Year Three respondents (Year Two = 82.9%) (Q11: mean = 4.06, SD = 0.876), and the *importance* of professional development activity chosen oneself was similarly rated quite or very highly by 78.0% (Year Two = 82.7%) (Q13: mean = 4.13, SD = 0.761). These figures echo the high importance given to professional development activity in general in responses to the Year One questionnaire (94.5% rating it quite or very highly), although the distinction in the Year Two iteration between hierarchical and heterarchical activities may have led to a slightly more cautious range of response (the median scores for these questions being 4 rather than the 5 scored in Year One, and the standard deviations being larger than in Year One). The repetition of this outcome in the Year Three iteration seems to confirm my explanation.

The *frequency* of engagement in professional development activity reported in Year Three was lower compared to its perceived importance, as it was in both Years One and Two, although the rewording or replacing of questions makes detailed comparison between the first and subsequent iterations problematic. The median scores in Year Three for frequency variables were 3 (Q14 and Q15) and 4 (Q12), as they were for Year Two, while in Year Three for importance variables they were 4 (Q11 and Q13) and 5 (Q10), also as they were for Year Two. In the domain of *'hierarchical', school-directed professional development*, 65.3% of respondents reported having engaged in it quite or very frequently (Year Two = 63.8%) (Q12: mean = 3.83, SD = 1.043), over 10 points lower than the equivalent score for its importance, though this is a smaller gap than the nearly 20 points found in Year Two; only 9.3% of responses (Year Two = 12.8%) rated this form of professional development activity as not at all or not very frequent. The comparatively large standard deviation for this question might suggest that staff's experiences varied quite markedly between schools, an inference which is supported by some interview responses.

In *'heterarchical disciplined' professional development, chosen oneself*, 32.0% rated their activity as quite or very frequent (Year Two = 35.0%) (Q14: mean = 2.84, SD = 1.215), as in Year Two a substantial gap of nearly 50 points compared to importance, and 38.0% (Year Two = 31.4%) scored this variable as 1 ('not at all') or 2 ('not much'). Below these two results sat *'heterarchical undisciplined', spontaneous professional development activity* (a question not asked in Year One but added to Year Two and Year Three) which was reported as quite or very frequent by 20.0% (Year Two = 28.5%) and as not at all or not very frequent by 38.0% (Year Two = 35.9%) (Q15: mean = 2.69, SD = 1.113). It could thus be said that the issue of agency was more closely interrogated in the second and third iterations of the questionnaire: classroom staff reported that they valued their own choice of professional development activity just as highly as they valued school-directed activity, but that they had far fewer opportunities to follow their own choices. The significant fall of 8.5 percentage points from Year Two to Year Three in reports of *'heterarchical undisciplined', spontaneous activity* appears to indicate that staff found ever less space for this form of agential development. This interpretation is supported by interview responses in both Year Two and Year Three, which reported the prevalence of top-down, school-directed development activity and the paucity of learner-centred, self-directed opportunities in nearly every sample school.

4.4.7   Year Three questionnaire: Factor 4 (Classroom staff attitudes to Teaching School Alliance, Questions 16 to 21)

Classroom staff attitudes to the Teaching School Alliance are much clearer than attitudes to professional development, as they were in the previous iterations of the questionnaire. The

questions under this factor remained the same as last year, so direct comparisons can be made. Even though fewer than half of all respondents were certain that their school is a member of the Alliance (Q31), mean scores for all questions under this factor were higher than in Year One and very close to Year Two's. This suggests that knowledge of the Alliance has become more widely spread since its first year, although there is no evidence of continued growth after the second year.

Understanding of the aims and functions of the Alliance was rated in Year Three as quite or very high by 30.7% (Year Two = 32.3%), and 39.3% reported some understanding (Year Two = 38.0%) (Q16: mean = 3.00, SD = 1.065), whereas the Year One mean score was 2.66 and 24.9% rated their understanding as quite or very high. *Support for the aims and functions* of the Alliance showed the greatest change from Year One to Year Two, with 52.4% rating it as quite or very high and 35.5% giving some support in Year Two with a mean score of 3.52, compared to 30.6% and 40.8% respectively with a mean score of 3.04 in Year One. However in Year Three the proportion of quite or very high ratings dropped back to 41.3%, with 40.0% giving some support (Q17: mean = 3.32, SD = 1.085), and the proportion rating this variable as 1 ('not at all') rose to 8.7% from 3.7% in Year Two. The median score for this variable fell from 4 to 3. Understanding of the *benefits of Alliance membership* fell slightly compared to last year; however, the mode score given for understanding of benefits to schools (Q18: mean = 2.80, SD = 0.987), to pupils (Q19: mean = 2.54, SD = 0.986) and to respondents professionally (Q20: mean = 2.67, SD = 1.024) was again 3 (neutral).

Willingness to engage in Alliance-generated activities fell with this factor's other variables, and fell furthest: the mean score in in Year Three was 2.88, whereas in Year Two it was 3.22. In Year Three, 25.3% of respondents reported that they were quite or very likely (Year Two = 37.8%), and 39.3% were fairly likely (Year Two = 45.4%), to take part in Alliance-generated activities (Q21: mean = 2.88, SD = 1.050). This was a significant decline compared to Year Two, and possible reasons were followed up in interviews as discussed below in section 4.4.14. Reliability (internal consistency estimate) for Factor 4 (Qs 16-21) is high: Cronbach's Alpha (*a*) is 0.905. This factor scored consistently high for reliability across the three iterations of the questionnaire.

This finding can be triangulated against data gathered under a question introduced in the Year Two iteration and retained in Year Three (Q30) which asks respondents to rank five ways of schools working together in order of importance to them. Due to significant failure to answer this question in Year Two, possibly due to uncertainty about what the options involve, for the Year Three iteration I added a brief explanation of each partnership type to the question. Not surprisingly given that, in Year Three, none of the sample schools belonged to an *Academy chain or trust*, this form of partnership was ranked lowest overall (Q30.1: mean rank = 3.97, SD = 1.376), followed by *Federation* (Q30.2: mean rank = 3.20, SD = 1.186) a form

which was also unfamiliar to staff in some of the sample schools; these rankings echo those found in Year Two, although the figure for *Academy chain or trust* fell quite markedly from a mean rank of 3.56 last year. Of particular note for this project, there was a significant decline in the ranking of *Teaching school alliance* (Q30.5: mean rank = 2.83, SD = 1.335) which dropped from first place to third of the five types of partnership offered in the question: the mean rank in Year Two was 2.41 which placed it marginally ahead of the second-ranked *Multi-school improvement partnership*. But in Year Three, *Multi-school improvement partnership* (Q30.3: mean rank = 2.09, SD = 1.273) was clearly in first place, was highly ranked by a greater proportion of respondents than in Year Two (68.8% ranked it 1 or 2, compared to 53.0% last year), and particularly high value was given to the type by staff in schools that belong to the local group of this type. *Two-school improvement partnership* was ranked second highest in Year Two (Q30.4: mean rank = 2.76, SD = 1.215), compared to third place in Year Two.

These data support the inference made above that classroom staff took a mostly non-committal view of the Alliance's activities, and that their attitudes to the Alliance did not improve from Year Two to Year Three. Only one of the eight sample schools was a member of the newly-formed Cohort 4 teaching school alliance when the Year Three questionnaire was distributed in June 2016, so it is unlikely that Q30 data were contaminated to a significant degree by confusion of the two alliances. However, respondents in this particular school gave *Teaching school alliance* a mean rank of 2.53 (compared to the whole-sample mean rank of 2.83) and placed it second rather than third, which may reflect their attitudes to the new Cohort 4 alliance in its first year of operations, rather than their attitudes to the original Alliance, by this point in its third year.

As it was for the Year Two iteration where this question was introduced, the reliability of Q30's results in Year Three is open to doubt, as the comparatively large standard deviations for each element suggest. The number of full or partial answers to the question (122) was significantly lower than the total number of respondents to the questionnaire (150) (81.3%). This was, however, a higher proportion of responses than in Year Two (64.4%), when those who did respond may have been uncertain in their answers because the question wording did not explain what each of the terms means. In addition, not every sample school has had experience of each type of collaboration. This question was excluded from factorial analysis because its ranking scale (1 = highest to 5 = lowest) is different from the Likert scale (5 = highest to 1 = lowest) used in the majority of questions.

In terms of innovation adoption theory, the 'reach' of the Alliance (the proportion of the target audience that is aware of the innovation) dropped somewhat and continued to be modest overall. This deduction is partly supported by evidence of discussion of professional development in respondents' social groups (Q28 and Q29). Inside their own schools, 47.3% of respondents reported having talked about development quite a lot or very much (Year Two

= 56.5%), and 28.0% reported some discussion (Year Two = 25.7%); the median score was 3 (Q28: mean = 3.37, SD = 1.180), compared to 4 in Year Two. Outside their own schools, however, only 15.2% scored this variable as 4 or 5 (Year Two = 21.0%), and 39.3% scored it as 1 ('not at all') (Year Two = 35.3%); the median score was 2 (Q29: mean = 2.12, SD = 1.187) as it was in Year Two, but the mean score fell to 2.12 from 2.35. These figures might be interpreted as confirming my inference in Year Two that a significant majority of classroom staff discussed professional development within their own working boundaries, possibly spontaneously, but that such discussion did not often extend beyond their own school walls. This echoes my inference that a barrier to between-schools collaboration is the lack of social group contacts beyond one's own staff room.

4.4.8   Year Three questionnaire: Factor 5 (Classroom staff attitudes to Big 6 strands of Alliance activity, Questions 22 to 27)

The importance to classroom staff of the six strands of alliance activity varied from strand to strand; a similar distribution of scores was seen in Year Two as in the two previous iterations, although the proportion of higher-end responses was smaller for each strand, except for ITT which showed a three percentage point increase. Given the importance to many respondents of professional development in general (Q10) and of opportunities to access CPD (Q11 and Q13), it is not surprising that CPD was again highly rated with 79.5% of valid responses scoring it as quite or very important (Q22: mean = 4.06, SD =0.947), compared to 82.1% in Year Two and 76.3% in Year One. Moving ahead of CPD this year was initial teacher training (ITT) with 84.4% rating it as quite or very important (Q23: mean = 4.22, SD = 0.846) compared to 81.1% in Year Two and 72.6% in Year One. These figures probably reflect the continuing high visibility of ITT in the sample schools: all six mainstream schools belong to one of the two SCITT group associated with the Alliance. Some way behind these strands, as found in Years One and Two, came school-to-school support (S2S) on 65.3% (Year Two = 73.6%) (Q26: mean = 3.82, SD = 0.939); and development and deployment of specialist leaders of education (SLEs) on 60.0% (Year Two = 67.4%) (Q27: mean = 3.72, SD = 1.063). Finally, leadership development and succession planning (LSP) was rated quite or very important by 59.3% (Year Two = 70.6%) (Q24: mean = 3.79, SD = 0.982); and research and development (R&D) by 58.7% (Year Two = 65.0%) (Q25: mean = 3.77, SD = 0.836). Reliability (internal consistency estimate) for Factor 5 (Qs 22-27) in Year Three is high: Cronbach's Alpha (α) is 0.902. This figure is close to those for Year One (α = 0.942) and Year Two (α = 0.885).

Many teaching school alliances across the country seem to have prioritised ITT and CPD as this Alliance has, and so it was more likely that classroom staff saw evidence of these

activities than of the other strands. The rise in attitude score of SLEs reported in Year Two dropped away in Year Three, due perhaps to the stalling of the strand as the advertising of posts was delayed and then reclassified as 'Lead Practitioners'.   R&D continued to lag, due in part to no Alliance-generated collaborative research activity being carried out for the third year running.

Attitude data under this factor can be triangulated against attendance data for alliance-generated CPD events aimed at serving classroom staff (excluding NQTs for whom separate provision was made), a summary of which is shown in Table 4.18 below:

Table 4.18:   Alliance-generated professional development activities for classroom staff

Activity	Year 1		Year 2		Year 3	
	Sessions in year	Attendees per session	Sessions in year	Attendees per session	Sessions in year	Attendees per session
Middle leadership	6 in 2 courses	25 + 28	6 in 2 courses	28 + 47	6	23
Assistant headship	6 in 2 courses	21 + 18	6	22	6	14
Deputy headship	6	8	*not planned*		*not planned*	
Primary middle ldrshp	*not planned*		?	28	*not planned*	
Pastoral leadership	*not planned*		*not planned*		6	11
Drama network	1	14	3	15, 24, 8	6	?
Media network	*not planned*		3	5, 7, 7	*not planned*	
Primary ICT	1	55	*not planned*		*not planned*	
Literacy	*not planned*		3 planned but cancelled		*not planned*	
GCSE English	*not planned*		1	40+	*not planned*	
GCSE Science	*not planned*		*not planned*		1	50+
Subject liaison meetings:						
Art	*not planned*		2	17, 15	3	12, 6, ?
Computing	*not planned*		1	4	3	8, 6, ?
Design Technology	*not planned*		1	7	2	14, ?
English	*not planned*		1	6	*not planned*	
Geography	*not planned*		1	5	1	5
History	cancelled by provider		1	2	2	3, ?
Mathematics	*not planned*		?	?	*not planned*	
Mod Foreign Langs	*not planned*		1	9	3	10, ?, ?
Religious Education	*not planned*		cancelled due to low nos.		1	1
Science	*not planned*		1	5	1	1
Textiles	*not planned*		*not planned*		3	4, 6, ?

The table above shows that, as in the previous two years, attendance rates in Year Three varied depending on the type of event offered and audience targeted. The best-attended activities were those which offered opportunities not available elsewhere, including

leadership preparation courses provided by an external contractor (in Year Three including Pastoral Leadership, a demand noted in my Year Two interviews); and a session on the new GCSE Science specifications commissioned by the county council's education team, run by an Alliance school in partnership with an exam board, and open to every secondary school in the county. Bringing in external expertise also continued to account in part for the popularity of the Art subject liaison meetings, although an important additional factor here continued to be the energy and charisma deployed by the Alliance's subject co-ordinator for Art. A heterarchical approach taken by Hasan to organising subject meetings for Design Technology bore significant fruit. Figures for Year Three seem to support the hypothesis offered last year that relatively small departments in 'niche subjects' may feel isolated within their own schools, and so the motivation to meet like-minded colleagues from other schools is greater than it might be in bigger subject departments. This year Mary (a subject leader) offered the same explanation. These comments made in interviews are further discussed under the relevant major coding categories in the sections on Year Three interview findings below.

4.4.9   Inferences from Year Three questionnaire

Analysis of questionnaire data (QUAN), both by individual variable and by factor, which is supported by cross-reference to relevant interview data (QUAL), led me to make the following inferences about classroom staff attitudes to the influence of the Alliance on their professional development:

1. A **gap between aspiration and practical reality** in terms of professional development was confirmed by the third iteration of the questionnaire. The issue of **agency** in professional development, here interpreted as 'heterarchical', learner-centred development activity, continued to be problematic in the current educational environment of high-stakes accountability. There appeared to be a substantial appetite for agential professional development, including collaborative work, amongst classroom staff that was not being met within or between schools.

2. Knowledge and understanding of the **Teaching School Alliance** was rated higher than in Year One, but continued to be limited overall in Year Three and in line with Year Two findings. When compared to other types of between-schools working, the teaching school alliance type was ranked lower in Year Three than the multi-school improvement partnership type, which continued to dominate the thinking of classroom staff in schools which belong to that type of group.

3. In comparing **CPD strand** activities generated by the Alliance in its first three years of operations, the observable increase in 'reach' claimed for the wider range of professional development activities in Year Two was not sustained into Year Three. 'Significance' continued to be an issue for Alliance leaders to consider: the most successful events in all three years offered something that could not be found elsewhere, while events which seemed to duplicate provision or were thought to lack relevance to perceived needs struggled to attract participants. Respondents' limited social group contacts outside their own schools contributed to an observed paucity of discussion of professional development opportunities.

These inferences were tested during Year Three Interviews, at the end of the project's data collection phase, in which I used a semi-structured interview format different from that used in Year One and Year Two. My aim in changing the way I interviewed was to open up opportunities for interviewees to offer their thoughts on my findings and inferences over the three years of the project. I showed each interviewee a copy of Figure 4.1 (*Questionnaire factor mean scores across all three iterations*) and invited comment on what the data might show. I again ensured that there was space for interviewees to mention any issues that they considered important, even if I had not asked directly about them. Findings drawn from Year Three interviews are presented in the following sections.

4.4.10 <u>Year Three interviews sample</u>

Interviewees were again drawn from self-selecting volunteers in sample schools who expressed interest in taking further part in my research project by providing a contact email address on their questionnaire form. In the Year Three iteration of the survey, there were 24 such volunteers. I contacted each of them to seek their agreement to an interview to follow up my questionnaire findings: 12 people replied positively to this invitation. Due to the later issue of the questionnaire in Year Three (in June, rather than in April as in Year Two or January as in Year One) and the substantial amount of time needed to analyse the data it produced, I decided to conduct the QUAL interview phase for Year Three in the autumn term of Year Four. By moving the interview phase back and being flexible with scheduling, I was able to arrange and conduct Year Three Interviews with seven volunteers, three of whom I had interviewed in Year One or in Year Two or both. Interviews were conducted between 17 October and 03 November 2016. I also conducted semi-structured interviews on issues pertaining to the operation of the Alliance and to practices in professional development with three further volunteers, one of whom I had interviewed in Year Two. These interviews were

conducted in March and in June 2016. Anonymised details of the interview sample are shown in Table 4.19 below:

Table 4.19:   Year Three interviews sample

Pseudonym	Length of service	Job description	School type	Interviewed in Yr One?	Yr Two?
Semi-structured interviews to follow up project findings and inferences:					
David	long service	subject leader	11-16 town	yes	yes
Deirdre	mid-career	classroom teacher	3-19 special	no	no
Edward	long service	senior leader	3-19 special	no	no
Elizabeth	mid-career	classroom teacher	3-19 special	yes	yes
Louise	mid-career	subject leader	11-16 rural	no	yes
Mary	mid-career	subject leader	11-18 +sixth	no	no
Philip	early career	subject leader	11-18 rural	no	no
Semi-structured interviews on practices in classroom staff professional development:					
Andy	long service	senior leader	11-18 +sixth	no	yes
Hasan	mid-career	subject leader	11-16 rural	no	no
Semi-structured interview on Alliance operations:					
Olga	n/a	administrator	n/a	no	no

The table above shows anonymised details of the interviewees who agreed to take part in Year Three interviews, which form the second strand of data (QUAL) in my sequential research design, following on from the first strand collected by questionnaire (QUAN). The proportion of subject leaders (five out of ten interviewees) is lower than in Year Two (seven out of eleven), although this remains the most frequent job description in the sample.   The clear and persistent difficulty in recruiting classroom staff for interviews is a matter of regret because it threatens to undermine the representativeness of the sample as a whole.

4.4.11 Year Three interviews: data coding and analysis

Interviews were again recorded using a digital MP3 recorder and transcribed as soon as possible afterwards. Repeating the method I used in Year One and Year Two, I coded each interview transcript inductively in order to identify significant patterns and to sift out irrelevance and trivia. I checked these codes against the four major categories that I

developed in the Year One Interview phase and carried forward to Year Two and Year Three.

What each interviewee chose to mention within each major category again varied quite considerably, both between interviews in this iteration and between iterations. I found that I again needed to develop additional sub-categories to analyse responses that covered new ground compared to Year One and Year Two, and some sub-categories developed in previous iterations were not used in Year Three. Major categories and sub-categories are shown in Table 4.20 below, with frequency figures for all three iterations.

I again tested the reliability of this qualitative data using the inter-rater method (Mays & Pope, 1995) by asking the same colleague to code independently three of the Year Three interview transcripts. The percentage agreement achieved between us for major category coding (four categories) was again over 90% ('almost perfect' agreement between raters (McHugh, 2012)). The percentage agreement for sub-categories within each major category (ranging from six to fourteen sub-categories per major category) was lower at around 70% ('substantial agreement').

I compared data segments to these sub-categories to check for relevance, and I compared each data segment to other segments in the same sub-category to make validating cross-references within each interview and between interviews. In order to reduce the volume of material that I had to analyse, I rank ordered items within each major category by the number of interviews in which the sub-category was mentioned, and gave most time to the most commonly mentioned items. However, I did not ignore outliers amongst the sub-categories, and I was again able to find useful and relevant material mentioned by only one or two interviewees. I exercised the same caution about generalising from a small number of responses to the wider population.

Table 4.20: Year Three interviews   -   coding categories

Major category	Sub-category	Code	Interviews where mentioned		
			Year 3 (*n*=10)	*Year 2 (n=12)*	*Year 1 (n=7)*
Collaboration	For improvement	C-I	8	*6*	*5*
	Sharing resources	C-R	5	*2*	*2*
	Sharing good practice	C-P	4	*6*	*3*
	Via personal contacts	C-C	4	*3*	*0*
	Visiting other schools	C-V	4	*2*	*1*
	Attitude to	C-A	3	*8*	*4*
	Leadership of	C-L	3	*6*	*3*
	Geographical	C-G	2	*3*	*0*
	Fluidity of	C-F	1	*2*	*1*
	For support	C-S	1	*6*	*2*
	For advantage	C-AD	0	*2*	*2*
Professional Development	Expectations	PD-E	7	*6*	*3*
	In-house provision	PD-I	5	*5*	*2*
	Top-down/hierarchical	PD-TD	5	*10*	*7*
	Heterarchical planned	PD-HP	4	*12*	*6*
	Heterarchical spontaneous	PD-HS	4	*3*	*3*
	Personalised	PD-P	3	*5*	*5*
+	Level	PD-L	1	*0*	*0*
Teaching School Alliance	Activities	TSA-A	9	*6*	*2*
	Effectiveness	TSA-E	7	*1*	*0*
	Knowledge of	TSA-K	6	*11*	*7*
	Publicity for	TSA-P	6	*8*	*6*
+	Initial Teacher Training strand	TSA-T	4	*0*	*0*
	Response to feedback	TSA-F	3	*0*	*1*
Obstacles	Money/funding	O-M	8	*8*	*5*
	Time	O-T	5	*12*	*7*
	Willingness/making effort	O-E	3	*9*	*3*
+	Leadership	O-L	3	*0*	*0*
	Need/relevance	O-N	3	*8*	*4*
	Other networks preferred	O-O	3	*7*	*3*
	Sustainability	O-S	3	*5*	*1*
	Workload	O-W	3	*3*	*1*
	Introspection	O-I	2	*5*	*4*
	Micro-politics	O-P	1	*3*	*1*
	Knowledge of opportunities	O-K	0	*6*	*3*
	Competition between schools	O-C	0	*3*	*3*
	University links	O-U	0	*0*	*3*
	Impact on own pupils	O-IP	0	*0*	*1*

+   *sub-category added in Year Three*

The table above shows the four major coding categories, and the varying number of sub-categories within each major category, that I developed during the analysis of my interview data. I present detailed findings under each major category in the following sections.

4.4.12 Major category: Collaboration

As they did in the two previous iterations, several interview responses in Year Three suggested that the focus of collaborative professional development activity was most often the subject department or (in special schools) the small, classroom-based team, and activity was both formally planned and spontaneous.   The aims of such work were said to be for improvement (sub-category C-I) and to share good practice (sub-category C-P), also frequently mentioned in Year One and Year Two responses. Sharing resources (sub-category C-R) was mentioned more frequently in Year Three than in previous iterations, as was visiting other schools (sub-category C-V) in order to achieve the aims mentioned above. Collaboration for support (sub-category C-S) was mentioned much less frequently in Year Three than in Year Two; this might simply reflect the different composition of the two interview samples.

The importance of personal contacts in establishing collaborative working (sub-category C-C, added in Year Two) was again noted by several interviewees: David said, "Mostly people have come to me and asked for help." His reputation for strong subject expertise had led to him being invited by a national subject network to lead collaborative professional development in the local area, but this was not an Alliance-generated activity. The sub-category of geographical influence on collaboration (C-G), also added in Year Two, was mentioned by Philip:

> When the Alliance came out we were all quite excited actually, especially as we're out on a bit of a limb in [name], a little bit away from [name] schools, and to be able to come back in and meet some other people, old friends, familiar faces, to work with them is really good … Being out on a limb, we can get very narrow-minded.   [Philip]

4.4.13 Major category: Professional Development

As in Year One and Year Two, interviewees reported that the overwhelming majority of professional development activity in their schools was directed by school leaders (sub-category PD-TD) although, due to the more open questions I used in Year Three's semi-structured interview format, less time was spent discussing this aspect. As in Year Two, some schools operated a formally-designated 'Teaching & Learning Team' consisting of a

small number of 'champions' whose task was to search out useful innovations in practice and tell their colleagues across the school about them. This appears to be a foundation for what several interviewees noted as a growing trend towards in-house provision of professional development activity (sub-category PD-I). Philip reported that staff attitudes to professional development in his school were more positive now compared to three or four years ago, he thought because of a policy shift away from "prescription" and towards more personalised development which "allows you to take all or nothing from it in a sort of non-threatening way" (sub-category PD-P). Mary suggested that an open, receptive attitude to professional development opportunities could be profitable: "I would go along to any CPD … if you just glean one thing then it has to be worthwhile." But she also observed that this level of willingness might be rare: "I think too many people in teaching are quite happy doing the same old, without thinking 'Is this effective?' " (sub-category O-E).

It appeared from questionnaire data in all three iterations that classroom staff were unsure about the notion of taking direct responsibility for their own professional development. But a notable contradiction of this inference was the positive attitude reported as common in special schools by both Deirdre and Elizabeth. Regarding agential development, Deirdre said, "I think if you needed time and you asked, time would be provided if you needed time to learn something new" and "I think most of us know where to go for help and support" (sub-categories PD-HP and PD-HS). This readiness to collaborate for development appears to be founded on the presence in special schools of professional therapists and other specialists who have qualifications and skills that classroom staff feel they need to tap. Elizabeth mentioned training given to her team by an Occupational Therapist newly appointed to the school. This particular configuration of staff and resources may not easily be replicated in mainstream schools, but the high level of motivation among the special schools' staff is worthy of attention.

A fresh sub-category added to the Year Three codes is *level of professional development activity* (PD-L). Only David mentioned this, saying:

> I've been a SCITT mentor for six or seven years, and that process hasn't really changed, although I do think we've seen a qualitative difference in the people coming through. My latest student is really quite excellent and that's based on four years as an LSA in a different school … The pace of learning and the nature of that learning is changing, and actually improving quite a lot … People are strongly invested, they've done a degree and have two or three years as an LSA, done a course, been an NQT, and it raises an almost natural professionalism, and by that I mean like with medicine, that will be the pull for the future of CPD. [David]

I took this comment to mean both that David expected newly-qualified teachers to be working at a higher level than he had seen previously, and that the level of professional development activity aimed at the whole school's staff could be raised by exploiting new teachers' knowledge, skills and professional attitudes.

4.4.14 Major category: Teaching School Alliance

The third year of the Alliance saw no further improvement after Year Two in classroom staff's attitudes to its purposes and functions. The most common response was still non-committal and understanding continued to be limited (sub-category TSA-K). Interview evidence supports this deduction: no school in the sample received significantly more information about the Alliance in Year Three compared to Year Two (sub-category TSA-P), and interviewees again said they believed that their colleagues were ignorant of what the Alliance is and does. Confusion of the Alliance with other forms of between-schools partnership persisted, with the local multi-school improvement partnership continuing to be regarded as the first-choice source of collaborative development activity by staff in schools which belong to it (sub-category O-O). The formation in Year Three of another local teaching school alliance, designated in Cohort 4, which took in several schools that had joined the original Cohort 3 Alliance which is the subject of this research, further complicated the picture for some interviewees.

The issue of the Alliance's effectiveness (sub-category TSA-E, added in Year Two) was mentioned much more frequently in Year Three because I raised it directly with interviewees: my aim was to ask them for their opinions about what the Alliance had achieved over the three years. Philip said that he had attended a middle leadership course which he felt "could have been two or three weeks shorter", and that the repeated offering of the same suite of events year on year was redundant, a point also noted by Olga. She commented that top-down direction of event scheduling by the Alliance leadership limited effectiveness; she felt that the leadership's attitude was, "We are the mother ship – this is what you'll be given." Andy felt that the Alliance had missed the opportunity to facilitate the sharing of good practice, and said he felt "frustrated that we couldn't work better with [other] schools." Mary commented on the subject liaison meetings generated by the Alliance (sub-category TSA-A) from her perspective as an Alliance subject co-ordinator: "I do wonder whether people view it as being worthwhile. So when I haven't had people turning up, is that because of the content?" Louise was disappointed by the repeated cancellation of meetings for her subject and undertook to host the next one "so that it won't be cancelled!" She also noted that she had been appointed as an SLE by the Alliance in Year Two, but there had been no activity in that strand yet.

4.4.15 <u>Major category: Obstacles</u>

The same lack of enthusiasm as noted in Year Two was seen for a majority of the subject networking events. Meetings were sometimes cancelled due to low numbers booking, or were not planned at all because of previous low attendance. As in Year Two, interviewees identified barriers to attendance at between-schools collaborative activities as:

- **money** (sub-category O-M,) mentioned most often in Year Three interviews, including the prohibitive cost of some Alliance-generated events being advertised for Year Four (for example, the leadership preparation courses run by an external contractor). There was a marked tendency, as funding cuts bit in real terms, for schools to run professional development activities themselves at lower cost, rather than buy in external providers or send staff out of school (sub-category PD-I).

- lack of **time**, often because in-school activities took up the time available to classroom staff for professional development activity (sub-category O-T);

- heavy **workload** where classroom staff were reluctant to add to it by attending additional events, compounded by **timings** of meetings ('twilight' was felt to be unappealing) (sub-category O-E);

- lack of clear **purpose or gain**, including doubts about embedding change after the CPD event (sub-category O-S), or finding a better fit for the school's or individual's needs elsewhere (sub-category O-N);

- **preference for other partnerships** (sub-category O-O);

- **micro-political tensions** between the two main urban concentrations of schools in the Alliance (sub-category O-P).

An added sub-category in Year Three was *inadequate leadership* of the Alliance as an obstacle to between-schools collaborative work (sub-category O-L). Edward said:

> I wouldn't say it was doing as well as it was. [Name] used to champion it before and he was visible, he'd be at a meeting and so you'd discuss about it, you'd find out from there, whereas now there's nothing. [Edward]

The failure by school leaders to pass on information to their staffs about Alliance-generated activities was mentioned by Olga, who thought that such information "stuck with CPD co-ordinators". This comment was contradicted by Elizabeth, who said that in her special school

senior leaders "have asked class teachers to encourage their teams" to take up development opportunities: "it sort of filters down and you then try to provide opportunities for your staff."

4.4.16 <u>Inferences from Year Three Interviews</u>

Analysis of Year Three Interview data, including comparison of my findings with those drawn from my Year Three Questionnaire data and from the Year One and Year Two iterations of my survey, led me to make the following inferences relevant to my over-arching research question:

1. Classroom staff consistently reported that their **schools direct their professional development** in order to meet school-level priorities. Opportunities to pursue individual needs and interests were consequently rare, even though they were considered as important by respondents as school-directed activities. This inference echoes similar findings from Year One and Year Two. Interviewees' comments on a graphical comparison of questionnaire data across all three iterations (Figure 4.1) largely confirmed this inference.

2. There was widespread **willingness to engage in collaborative developmental work**. This was mostly limited to collaboration within an individual's immediate working team, although there was evidence of such work at school level. This inference also supports a similar one drawn from the first two iterations.

3. **Knowledge of the Teaching School Alliance** in its third year of operations continued to be thin, with little sense among classroom staff of how the Alliance might aid their professional development: this echoes findings from Year One and Year Two. Classroom staff continued to think of **other, pre-existing partnerships** when they thought of between-schools development work, and micro-politics played a part in that perception. Attitudes to the Alliance's activities, effectiveness and leadership were not positive overall. Inferences drawn from comparing questionnaire data across all three iterations (Figure 4.1) were largely confirmed by interviewees' responses.

4. The chief obstacles to engaging in collaborative development work of any kind were reported as the **lack of time** available to classroom staff and **lack of willingness** to spend free time on such activity. Other important obstacles included **lack of funding**, and a tendency to **introspection** at both school and individual levels which

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negatively influenced the **perceived relevance** of professional development activities offered by the Alliance. These findings add to my understanding of why, in all three iterations of my questionnaire, classroom staff reported a gap between aspiration and practical reality in their professional development.

I have thus been able to use the second strand (QUAL: interviews) of my mixed-methods, multi-strand, sequential research design to confirm inferences from the first strand (QUAN: questionnaire), and to further add to my understanding of how and why the teaching school alliance innovation spread or did not spread over its first three years within my sample population. In the final section of this Chapter which follows, I present overall, combined inferences drawn from all three iterations of my sequential QUAN → QUAL research design.

4.5　Overall combined inferences from the three iterations of the survey

Taking together questionnaire (QUAN) and interview (QUAL) findings from the three iterations of my multi-strand, sequential research design, I am able to make the following overall inferences from my research data:

1. In terms of **innovation diffusion theory**, the 'reach' of the teaching schools innovation amongst my sample population showed marginal improvement from Year One to Year Two but stalled going into Year Three. This could be interpreted as 'discontinuous change' (Tushman & O'Reilly, 1996). There was no sign of the take-off in classroom staff attitudes to the Alliance that the theory predicts in its S-shaped curve model (Rogers, 2003). I suggest that the chief reason for this is that **'significance' remains a fundamental issue**: the most successful events in all three years were those which offered something that could not be found elsewhere, while events which seemed to duplicate provision or were thought to lack relevance or gain have struggled to attract participants.

2. The issue of **'heterarchical', agential professional development continues to be problematic** in the current educational environment of high-stakes accountability. There appears to be a substantial appetite for this form of professional development activity amongst classroom staff, but it is not being met within or between schools. Given its principal remit to bring people from different schools together for the purpose of improvement, I suggest that this is an area in which the Alliance might be able to provide what cannot be found elsewhere.

3. The strong influence of **other between-schools partnerships** on attitudes to the Alliance was addressed in the second iteration of my questionnaire, and the addition of brief explanations of each type to the questionnaire's third iteration was designed to help respondents to distinguish between them. This step may have contributed to the fall in ranking position of the teaching school alliance type. However, respondents in the one sample school which had joined the new local Cohort 4 alliance ranked this type significantly higher than did respondents in the other seven schools. The problem thus seems to lie to some extent in the subject Alliance itself, rather than in the teaching school alliance model *per se.*

4. The gathering of **attendance figures** for the various Alliance-generated events taking place each year, in order to triangulate both questionnaire and interview findings

about attitudes to the Alliance and willingness to engage in its activities, proved useful to my analysis in Year Two. I therefore continued this data strand in my Year Three survey. The figures confirmed a failure of Alliance-generated professional development activity to take off among classroom staff in sample schools.

These inferences can be illustrated by comparing the factorial structure of the data across the three iterations of the questionnaire. Figure 4.1 below shows the mean score for each factor in each iteration:

	1	2	3	4	5
Year 1	3.98	4.68	3.91	2.82	3.78
Year 2	3.78	4.40	3.17	3.09	3.94
Year 3	3.80	4.32	3.12	2.87	3.89

Factor 1   school level support for change

Factor 2   attitudes to change: importance

Factor 3   attitudes to change: frequency

Factor 4   attitudes to Teaching School Alliance

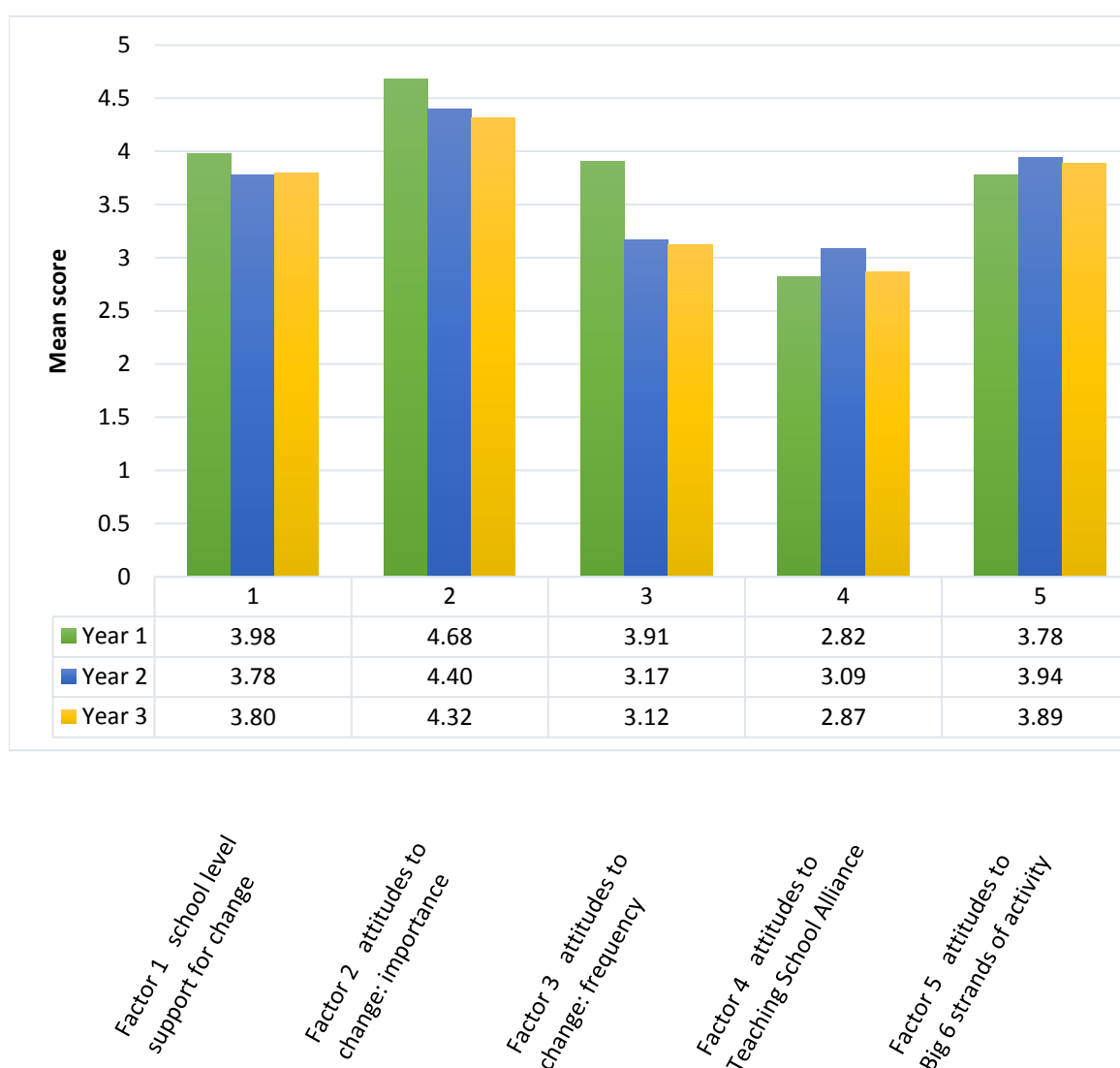Factor 5   attitudes to Big 6 strands of activity

Figure 4.1:   Questionnaire factor mean scores compared across all three iterations

The comparative data shown in Figure 4.1 above suggest that respondents' attitudes to their school's support for change (Factor 1) were consistent across the three years of this project, and were reasonably positive. Respondents were strongly positive about the importance of change in their professional practice (Factor 2), but were consistent in reporting lower scores for the frequency of opportunities to pursue change via professional development activity (Factor 3). Indeed, Factor 3 shows a marked fall in mean scores from Year One to Years Two and Three which is not seen in any other factor shown in this table. Attitudes to the Teaching School Alliance which is the subject of this study (Factor 4) were reported as largely neutral through the three iterations of the questionnaire; a small peak can be observed in Year Two. Attitudes to the 'Big 6' strands of teaching school alliance activity (Factor 5) were consistently reported more positively than attitudes to the Alliance to which respondents' schools belong. The significant difference between Factor 5 and Factor 4 may echo the difference between Factor 2 and Factor 3: respondents may have felt that they supported in principle the work that a teaching school alliance could do, but they did not regard the work of this particular Alliance positively.

In the next Chapter, I present discussion of these findings from the three iterations of my multi-strand, sequential, mixed-methods research design. I relate my findings and the inferences I have drawn from them to theoretical models in the fields of change and of collaboration, and I develop a case-based, emergent theory of why classroom staff may choose to take up or not take up professional development opportunities offered by a teaching school alliance.

Chapter Five

Discussion

5.1   Introduction

This thesis investigates educational change in a collaborative setting. The form of collaboration embodied by my subject organisation is the **teaching school alliance**, an innovation theorised principally by David H Hargreaves (2010, 2011, 2012) and instituted by the Coalition government's White Paper, *The Importance of Teaching* (HM Government, 2010). The teaching school model aims to hand to school leaders and teachers the responsibility for improvement in each school and across the education system, a move founded on the notion that schools are better able to lead the work of other schools than are agencies outside schools. This is seen by its proponents as a means towards the goal of a **self-improving school system**, in which school leaders and classroom staff aim to achieve better outcomes for all pupils, not only for those in their own schools.

The primary aim of the research reported in this thesis is to investigate the influence on classroom staff's professional development of a local teaching school alliance. Unlike other research in the field which has tended to focus on leaders (usually headteachers and principals), I approached this problem by asking the serving classroom staff on whom change depends what they do and what they think (Fullan, 2001a). My aim is thus to uncover reasons why classroom staff might choose or not choose to take up innovations for educational improvement in a collaborative setting.

Both policy-makers and academics agree that classroom staff are the people who really matter in improving outcomes for pupils (Bishop, 2011; Day, 2011; Leithwood, Harris & Strauss, 2010). Because the **professional development** of classroom staff is key to their effectiveness (Levin, 2008; Joyce & Showers, 2002), and because their effectiveness is key to improving pupils' outcomes, the main focus of my project is on the Continuing Professional Development (CPD) strand of teaching school alliance activity. My overarching research question is therefore:

> *What is the influence of the teaching school alliance innovation on the professional development of serving classroom staff in its member schools?*

This chapter discusses my research findings in the light of the current theoretical and empirical literatures in the fields of change and of collaboration. I need to consider the literature from both fields because partnership work for improvement between schools adds a collaborative layer to the already complex problems of spreading and embedding change in a single organisation. I develop an emergent theory (Eisenhardt & Graebner, 2007; Eisenhardt, 1989) to help explain why classroom staff may choose to take up or not to take up professional development opportunities offered by a teaching school alliance. This emergent theory is founded on answers that I propose to the three sub-questions that I derived from my principal research question. In outline, my answers to these sub-questions are:

(1) How do professional development activities spread or not spread among classroom staff in Alliance member schools?

Classroom staff report prioritising personal and individual considerations when choosing whether or not to take up a professional development opportunity. These considerations include the relevance of the innovation to their own practice; the degree of agency they have in meeting individual needs and goals; the degree to which their beliefs about change can be aligned with their behaviours; and the amount of time they have available to spend on change activity, most of which is directed by their school leaders.

(2) What are the facilitators and/or barriers to the spreading of effective practice among classroom staff in Alliance member schools?

Classroom staff report a positive attitude to change in principle: they are mostly willing to surrender the status quo, and they report an appetite for improvement. However, the management of change in schools can act as a barrier to the spreading of effective practice. Classroom staff need to feel that they own the change if they are to buy into it. If they do not perceive that their individual needs and goals are being addressed, then innovations are less likely to be embedded into their practice.

(3) How is the Alliance perceived by classroom staff in its member schools?

Classroom staff report a positive attitude towards collaboration, although this is chiefly at the level of their own school, subject department or team. System-level collaboration is seen more neutrally: while the strands of teaching school alliance

activity are thought to be worthwhile in principle, classroom staff do not regard *this* Alliance as important to their own professional development.

My emergent theory is founded on a case study of a single teaching school alliance: it responds to what classroom staff in its member schools told me about their attitudes to change and to collaboration, and it seeks to explain via a multi-level, ecological lens (Bronfenbrenner, 1979, 1989; Jacobs, van Witteloostuijn & Christe-Zeyse, 2013) the 'change ecology' that influences classroom staff to take up or not to take up professional development opportunities. This theorisation is related to other forms of between-schools working and is framed by the existing literatures of change and of collaboration. It can thus be applied on a broader scale to the overarching concept of collaboration for educational improvement, and not only to the teaching school alliance model itself.

5.2 Change in educational settings

For the purposes of my research, I conceptualise change in educational settings at the level of classroom staff (qualified teachers and non-QTS classroom assistants) as the successful diffusion of innovative practices and attitudes that focus on improving outcomes for pupils (Fullan, 2001a). My major finding is the apparent failure of my subject Alliance to diffuse the innovation of collaborative professional development amongst classroom staff in its member schools. In this section, I discuss possible reasons for this finding in the light of current thinking about change as discussed in the literatures of change in organisations and change in education.

5.2.1 Business models of change

No one believes that change is easy, as the extensive literature on change in the fields of business administration and organisational management theory demonstrates. Remarkably, there has been little reference to this body of work in discussions of educational change efforts (Lim, 2010). In Chapter Two of this thesis, I examined the range of conditions necessary for effective change proposed by various commentators in the business and organisational fields (Bridges, 2003; Schein, 2004; Straglas, 2010; Kotter, 2012; Hayes, 2014). The very substantial corpus of evidence drawn on by these scholars suggests to me that their findings are robust and well-founded, and are worth considering when investigating change in other settings, even if some scholars deny the usefulness of placing research

before practice (Fullan & Boyle, 2013). I therefore propose blending what seem to be the commonly-agreed core factors in these business-based models into a framework for analysis which I apply to my empirical research findings in this Chapter. The key elements in my analytical framework drawn from the literature of organisational and business change are:

- **surrendering the status quo** (accepting the need for change)
- **a powerful guiding coalition** develops a **vision** of change
- **effective communication** by change leaders to stakeholders
- **implementing and sustaining** change via empowering of stakeholders.

The opening stages of the business-based models that I examined in Chapter Two seem to emphasise the **rejecting or surrendering of the status quo**, and this condition was indeed experienced at an organisational level by the schools which came to join the subject Alliance in 2013. The changes in educational policy that I examined in Chapter One of this thesis focused on 'hollowing out' the middle layer of the English education system (typically the county-level education service) and replacing it with a 'self-improving school system' (Matthews & Berwick, 2013; Mourshed, Chijioke & Barber, 2010). As a result, local school leaders may have experienced involuntary 'unfreezing' and therefore they felt impelled to seek organisation-level support in new ways, including collaboration with other schools. It is also apparent in my evidence that some school leaders and some classroom staff saw the teaching school alliance model as an opportunity to broaden their horizons beyond their own school walls. At the levels of the individual and of the team, my evidence suggests a substantial appetite among classroom staff both for improvement to their practice (a desire which respondents believed was largely supported by their schools); and for collaboration between staff in their own school and beyond. My research thus suggests that the initial conditions identified in the literature as necessary for change (Straglas, 2010) were mostly favourable in the schools which joined the Alliance in Year One: there was a recognition of the need for change because the status quo was 'disconfirmed', and classroom staff reported willingness in principle to undertake change.

The collaborative format of the teaching school alliance helped to meet the second step of Kotter's (2012) change structure (also present as a guiding question in stage 1 of Hayes' model (2014)), that is, forming a **powerful guiding coalition** to lead change. Headteachers and principals showed a positive attitude to the opportunities offered by the Alliance and signed up in numbers: the Year One total membership of 26 schools and other institutions appears to be comparatively large among early-cohort teaching school alliances, although not at the top end of the range (Gu et al., 2014). The Steering Group which determined Alliance strategy was composed of headteachers and a school governor, and the

Operational Management Group which led the Alliance's routine work included senior leaders from several member schools. These leadership groups developed a **vision** for the Alliance which prioritised Initial Teacher Training (ITT), a collaborative undertaking that was already running successfully in the local area. Continuing Professional Development (CPD) was addressed in limited form, with the focus on leadership preparation courses provided by an external contractor (which had also run before the birth of the Alliance) and on subject-based meetings, because this was the perceived demand amongst local schools. However, in the case of subject-based activity, there are grounds for arguing that this vision mostly did not answer demand amongst local *classroom staff*, whose needs were not considered on an individual level by the 'guiding coalition'. The exception to this finding is the case of small, 'niche' subjects such as Art, Design Technology, and Drama, whose staff may have felt isolated in their own school and therefore welcomed the opportunity to meet fellow subject specialists from other schools.

Kotter's (2012) and Hayes' (2014) models of change implementation emphasise the importance of effective **communication** by change leaders in securing at least the support, and preferably the active participation, of stakeholders in implementing change. Both Bridges (2003) and Schein (2004) include communication of a "compelling positive vision" as a necessary part of the psychological support of change (Straglas, 2010, p32). It is in this respect that the subject Alliance appears to have failed to manage change. Interview evidence strongly indicates that neither the overarching vision of system-level collaboration, nor practical details of the opportunities that the Alliance could offer, were communicated to serving classroom staff. Knowledge was confined to those people who actively sought it out because they had reason to do so - 'early adopters' in innovation diffusion theory (Rogers, 2003). Staff who anticipated applying for leadership posts in the future signed up to the leadership preparation courses. Members of small subject departments were comparatively more willing to attend subject network events than their colleagues in other, larger departments. Overall, attitudes to the Alliance and its work remained neutral through the three years of the survey, and interview evidence suggests a sense of disappointment or frustration amongst some respondents at the failure to communicate a 'compelling positive vision'.

In the light of this failure to communicate, the subsequent stages of **implementing and sustaining change** could not be accomplished on a system-wide scale. With a few exceptions, attendance data for Alliance-generated activities showed no sign of the 'take off' in adoption that the S-shaped curve of innovation diffusion theory predicts (Rogers, 2003). There was little evidence of the long-term commitment to change among organisational members, necessary to consolidate gains and produce more change, which is expected by the change models that I examined in Chapter Two. This outcome may be interpreted as a

consequence of the failure by the Alliance's leaders to recognise that radical change is often driven by lower level employees rather than leaders, and that employees need to act as change agents themselves in an individually-mediated, system-wide change process (Monnot, 2016). There was little sense of classroom staff being 'empowered to act on the vision', so there could be no 'anchoring of new approaches in the organisational culture' (Kotter, 2012). In terms of Hayes' two continuities that span his sequence of stages, the Alliance leadership did not 'learn' from early feedback, and did not 'manage the people issues' sufficiently deftly to engage influential individuals and groups. In short, the Alliance did not achieve 'buy-in' (Carsten & Bligh, 2008) by a significant number of classroom staff to the change goal. These findings echo recent research on the necessity of 'rigorous and sustained implementation' if collaborative development work is to become widely embedded in practice (Harris & Jones, 2017). If this is not achieved, then knowledge is rarely mobilised beyond immediate participants in a collaborative initiative (Greany & Maxwell, 2017).

5.2.2   Education models of change

Study of the management of educational change, being a relatively recent field of enquiry, is still on a journey towards wide and deep agreement on its core concepts (Lieberman, 2005). It has a less developed body of evidence on which to draw than that available in the business administration and organisational management fields. I believe that there are useful parallels to be drawn between education and business (Lim, 2010) because schools are organisations composed of people in a more or less hierarchical structure just as businesses are, but I also acknowledge that schools demonstrate some features that separate them from purely commercial undertakings. I have therefore developed a further analytical framework which blends key insights from the models of change in education that I examined in Chapter Two of this thesis. The elements in my second analytical framework are:

- **high-stakes accountability** (influence on willingness to change)
- **moral purpose** (improving pupils' outcomes as the chief goal of education)
- **effective professional learning** (to create consensus around a sustained shift in staff's attitudes)
- **coherence-making** while enduring uncertainty
- **maintaining** basic functions of school while enacting change.

Evidence on attitudes to educational change collected by my survey indicates that heterarchical, agential professional development activity is as important to classroom staff as hierarchical, top-down activity. But opportunities to pursue agential development were said to be rare compared to the dominance of hierarchical activities determined by senior leaders in the light of the dominant policy imperative of **high-stakes accountability**. This

dominance may lead to a mismatch between demands for accountability and the ability to effect genuine change (Elmore, 2000). Indeed it has been suggested that, because the administrative structure of schools exists to buffer the instructional core from disruptions and improvements, and because teaching is isolated work, "instructional improvements occur most frequently as a consequence of purely voluntary acts among consenting adults" (*ibid,* p.7) – that is, changes in practice happen heterarchically if they happen at all. My research found a strong tendency for school leaders to determine their staff's formal development activity hierarchically so as to accord with the school's development plan, which was itself a response to the current "uncertain and confusing policy context" (Ainscow, Dyson, Goldrick & West, 2016, p.8), whereby the performative demands of a school's latest inspection judgement are the dominant factor in improvement efforts. This approach could be interpreted not so much as 'buffering' against change in Elmore's sense, but rather as a *narrowing* of change activity to focus on measures that respond to the accountability agenda (Pedder & Opfer, 2011; Sugrue & Mertkan, 2017). My findings suggest that this hierarchical goal was pursued at the expense of classroom staff's own choices of heterarchical, agential development.

A Year One interviewee raised the idea that classroom staff may choose not to adopt change that they perceive has no benefit, or even runs counter, to their pupils' interests (Kirkland & Sutch, 2009). This obstacle to change could be explained in terms of another significant difference between the education and the business fields. The importance to education of **moral purpose**, the drive to "make a difference in the lives of students", means that "teachers are moral change agents" (Fullan, 2001a, p.16). It was reported by several interviewees that they did not attend Alliance-generated activities because they could not see relevance to their daily work. If this is taken to mean that they could not see benefit to their pupils, then these decisions not to adopt the innovation could be understood to be influenced by moral purpose.

The evidence gathered by my research suggests that the subject Alliance did not achieve (for most respondents) the **sustained shift in attitudes** that effective professional learning would imply, nor did it successfully craft **coherence** between reform aims (at system and school levels) and everyday practices (at team and individual levels). As discussed in the preceding section 5.2.1 which considers models of organisational change, this seems to be due chiefly to a failure to communicate the goals and purposes of the teaching school alliance innovation to the majority of classroom staff: respondents reported meagre knowledge of what the Alliance was for and could do. Except for the particular instances of people seeking promotion, and people working in small, isolated departments, respondents mostly did not feel committed to or engaged with the Alliance's work such that they were willing to give time to it in addition to the time already committed to school-directed

development activity. In innovation theory terms, most classroom staff did not see the Alliance's activities as meeting their individual needs ('consumerism-driven'), but rather as answering wider social needs ('professionalism-driven') which they did not consider personally relevant (Dudau, Kominis & Szocs, 2018).

Substantial research attention has been paid to change management work which focuses on leading the **professional learning** of the school community and thus on building a shared consensus on goals inside the school (Fullan, 2001a, 2014; Robinson, 2011; Leithwood & Sun, 2012). These factors could be interpreted as being similar to the 'process' approach to change identified in the business-based change literature (Bridges, 2003; Schein, 2004) in that they seek to achieve a shift in attitudes to improving pupils' outcomes by negotiating the meaning and acceptance of the reform between actors at different levels of the school system. This approach builds on Senge's 'learning organisation', the aim of which is to harness individual workers' thinking into "shared 'pictures of the future' that foster genuine commitment and enrolment" (1990, p.9).

On the other hand, the work of school leaders in crafting **coherence** between reform aims and everyday practices, all the while **maintaining** the day-to-day functions of the school, could be seen an instance of the 'implementation' approach developed in the business field by Kotter (2012): particular actions need to be identified, communicated, enacted and reviewed (Hattie, 2009; Segura Pirtle & Doggett, 2013; Robinson, 2011; Copland & Boatright, 2006). Dimensions that require action when implementing educational change are said to include: focus on student learning as the primary goal; leading teaching and learning; ensuring quality teaching via use of data and evidence; strategically aligning resources with learning improvement goals; ensuring an orderly and safe environment; and engagement with the wider community of stakeholders. It may have been the case that the hierarchical development activity reported by my respondents did operate in these dimensions, but classroom staff saw it as being led at school level by their own headteacher and other senior leaders, not at system level by the Alliance. The change to practice envisioned by the teaching school alliance innovation did not lead to a sustained shift in staff's attitudes – that is, change was not embedded or 'normalised' into the practice of most classroom staff in my sample.

The problems of embedding change in educational settings have been addressed in recent work by Wood (2017). Drawing on experience of change management in the fields of health and social care, he proposes applying Normalisation Process Theory (May & Finch, 2009) to the field of education. Wood characterises innovations that exist in strategic plans and are recorded in set-piece observations, but are not normalised into teachers' day-to-day practice, as "a form of zombie innovation" (2017, p.34). To help actors embed a new ensemble of activities into "the matrices of existing, socially patterned, knowledge and practices" (May &

Finch, 2009, p.540), Wood develops a four-stage sequence of questions. Commonly-observed psychological barriers to sustained change in educational settings, which "tend to be linked to a lack of teacher agency, remotely generated and managed change, a lack of time to engage with change processes, and scarce resources" (Wood, 2017, p.37), are addressed by the question sets: *Coherence* – 'what is the work?'; *Cognitive Participation* – 'who does the work?'; *Collective Action* – 'how does the work get done?'; and *Reflexive Monitoring* – 'how is the work understood?'

As discussion of my findings in this section suggests, there appear to have been significant problems for my subject Alliance under each of Wood's question sets. Alliance leaders could not offer a persuasive description of what the innovation was for (the *Coherence* question set); nor engage classroom staff to work on the innovation in numbers (*Cognitive Participation*); nor show compatibility of the innovation with current work so that it could be absorbed into practice (*Collective Action*); nor modify the innovation significantly in the light of participants' attitudes to it (*Reflexive Monitoring*). Wood argues for "the need for normalisation processes to be driven by those involved" (*ibid*, p.37), but it is clear from my evidence that this did not happen in much of the work in the CPD strand of my subject Alliance. I would not go as far as claiming that the Alliance produced 'zombie innovation' in this strand: a limited number of participants did adopt the innovation because they saw themselves as future leaders, or were members of small departments and felt benefit in meeting colleagues in a similar situation. But my findings suggest that a large majority of respondents did not value the Alliance's professional development work, and did not 'normalise' the change in practice that participation in it represented. A discussion follows in the next section of the particular challenges that the CPD strand of the Alliance's work appears to have faced.

5.2.3   Professional development for serving classroom staff

My findings indicate that classroom staff's attitudes to their own professional development are problematic. The measurable gap in my questionnaire data between Factor 2 (*Attitudes to change: importance*) and Factor 3 (*Attitudes to change: frequency*) shows that what respondents believed about change (in relation to their own professional development), and what they reported doing about it, differed considerably. I have developed the following analytical framework from the literature on teachers' professional development to explain my findings:

- gap between **beliefs and behaviours** about professional development
- **'supermarket' approach** to professional development activity
- **agency** in professional development
- importance of **heterarchical** professional development activity.

As an example of the problems faced by change leaders, attention has recently been paid to the practical difficulties of getting classroom staff to use evidence consistently and regularly to improve teaching and learning (Nelson, Mehta, Sharples & Davey, 2015), while many governmental agencies around the world have been promoting the importance of evidence-informed change to educational improvement (Brown, 2015). This particular impasse seems to illustrate the critical factors which influence the success or failure of efforts to change practices in educational settings. Brown & Zhang (2016) use a rationalist lens to argue that the fundamental problem in failed change efforts is **a gap between beliefs and behaviours**. Their analysis is supported by the work of Sales, Moliner & Amat (2017), who identify the persistence of tensions between theory and practice, and between school culture and innovation, specifically in the domain of collaborative professional development.

An important reason for this discrepancy between beliefs and behaviours that might be applied to my subject Alliance has been suggested by Gu et al. (2015) in their evaluation of teaching schools for the National College. They use a meta-review of the literature on teachers' professional development by Cordingley et al. (2015) to identify key factors in the effectiveness of professional development activity as: a sustained focus on pupil outcomes; extended duration of at least two terms; multiple and iterative activities after the initial input of the programme; and overt relevance to participants' daily practice. Drawing on longitudinal data at national level, Day & Gu (2007) argue that schools need to develop 'expansive' rather than restrictive learning cultures and practices which pay attention to individual differences, needs and preferences of participants. Evidence collected by my survey suggests strongly that this 'expansive' approach to professional development was not adopted by Alliance leaders.

A review of research evidence by Armstrong (2015) notes that studies have found an increase in teachers' professional development activity, and in the sharing of good practice and innovation, as a result of inter-school collaboration. However, contrary to the research evidence on *effective* professional development cited in the paragraph above, Gu et al. (2015) report that several of the teaching school alliances that they observed undertook a 'supermarket' approach to professional development. Their offers consisted of a range of pre-determined training courses from which participants could pick 'off the shelf' as they wished. A more collaborative, school-based, blended model which answers participants' specific needs (which might be understood as 'joint practice development' or JPD, which I

discuss in Chapter Two) was not widely offered, perhaps because it is difficult to resource and sustain. The **'supermarket' approach** is exactly what my subject Alliance pursued: despite a claim by an Alliance leader in Year One that this was in response to need, I suggest that the response was to what Alliance leaders *perceived* to be development needs, and they responded to school-level demand rather than to individual, classroom staff-level demand. With the exceptions already noted of people who wanted to pursue leadership development activities for promotion, and of people in small departments who felt the need to meet peers in other schools, a substantial majority of the respondents to my survey did not find the Alliance responsive to their individual professional development needs.

This deduction tallies with my findings on the issue of **agency** in classroom staff's professional development. Respondents to my survey felt that they had little scope for exercising genuine choice or for meeting their individual needs in their professional development. This was said to be due largely to the strongly hierarchical tendency of school leaders to determine the goals and content of professional development activity that took place in school time, which was influenced by the demands of the school-level development plan in response to the school's latest inspection judgement. Such an approach could be seen as a failure to create the space in the school day necessary for collaborative, agential development (Cornelissen, McLellan & Schofield, 2017). Agency is increasingly being seen as a key factor in the successful enactment of change in educational settings (Pyhältö, Pietarinen & Soini, 2014; Philpott & Oates, 2016; Tao & Gao, 2017). I suggest that the widespread sense of confusion among my respondents over what agency might be, and how agential choice could be enacted, was a significant barrier to the Alliance's work in the professional development strand.

My conceptual model of continuing professional development, which I present in Chapter Two, recognises the **importance of heterarchical activity** founded on collaborative relationships between participants, 'done with' other professionals by choice. Such activity is theorised in two forms: 'disciplined innovation' that is equal, longer term, learner-centred and brokered; and 'undisciplined innovation' that is teacher-led, trusting, mutual and emergent (Hargreaves, 2003, 2011; Fielding et al., 2005). The lack of agency and the prevalence of hierarchical activity 'done to' participants, as reported by many of my respondents, suggests that the heterarchical domain of professional development could not be mobilised by the Alliance's model of collaborative, system-level self-improvement. Reasons for the limited achievements of the Alliance in fostering collaborative working between classroom staff across its member schools are discussed in the following section.

5.3 Collaboration for advantage and system improvement

The theory and policy underpinning the teaching schools initiative places emphasis on the synergistic advantages to be reaped from "teachers work[ing] together to develop reciprocal professional learning" (Burley & Pomphrey, 2011, p.48). The goal of a self-improving school system is to achieve improvement for all pupils in the system (Fullan, 2005), and the means to reach that goal is claimed to be the collectivising of individual teachers' and schools' efforts into collaborative networks. Effective collaboration depends on a complex blend of factors, and claims for the relative importance of factors vary widely from commentator to commentator. I propose blending Hargreaves' (2010) theoretical work on a 'self-improving school system' with empirical evidence on effective inter-school partnerships (Gu, Rea, Hill & Parish, 2012; Mujis, Ainscow, Chapman & West, 2011), together with consideration of the insights into implementing business alliances and networks reported by Bell, Kaats & Opheji (2013), to produce a distillation of the fundamental building blocks of between-schools collaboration as:

- **structural** (clusters of schools which work together within an agreed leadership structure);
- **cultural** (commitment to co-construction for mutual benefit at a local level, taking account of context);
- **relational** (trusting, lateral relationships which develop over time, with effective communication between actors).

The performance of the subject Alliance in terms of these building blocks is discussed in the following sections.

5.3.1 How far did the Alliance meet structural requirements for successful collaboration?

The Alliance represents a new form of collaborative partnership, compared to earlier forms of between-schools working, in that it is formally mandated at national level; it involves an unprecedentedly large number of schools spread over a substantial geographical area; and it has a formal leadership structure which expects to direct the Alliance's work.

The **leadership** of the CPD strand by the Alliance was perceived by respondents to my survey as operating largely in a hierarchical, top-down or 'transmission' mode, much as they saw their own school leaders operating (Fielding et al., 2005; Kennedy, 2014a). The key issue of what CPD activities were to be offered by the Alliance was determined on the basis of perceived school-level needs, and individual classroom staff were not consulted on what they felt would be worthwhile and attractive opportunities. Probably as a result of this lack of participant involvement in decision-making about forms of collaboration (Atkinson, Springate, Johnson & Halsey, 2007), respondents did not feel that they 'owned' the collaboration

(Coleman, 2011) in that they knew little about it and showed only a neutral level of commitment to it. The product of this leadership failure was low levels of attendance by classroom staff at many professional development events generated by the Alliance, exceptions being those events which appealed to individuals because of their particular situation or ambitions, or which offered something not available elsewhere.

The **size** of a network has been shown be an important factor in its effectiveness (Atkinson et al., 2007). At 26 members which are divided geographically between the two main towns in the local area, the Alliance could be said to be both too large and too disparate to build a network based on strong social ties (Hallinger & Heck, 2010); social capital is a key element of what Hargreaves (2011) calls 'partnership competence'. Respondents in both main towns said that they observed reluctance among their colleagues to travel beyond their immediate location to attend Alliance-generated events. By way of comparison, the second, Cohort 4 teaching school alliance established locally a year later is significantly smaller at only six secondary schools (plus nine primary schools, making 15 in total), and is more closely grouped geographically. One interviewee in Year Three of my survey suggested that this new teaching school alliance was attracting substantial interest in its professional development events, which mostly followed the model of one-off lectures by external experts for large audiences.

Coleman (2011) draws attention to **micro-political tensions**, such as competition between schools, as a potential barrier to working together effectively. Some of my interviewees mentioned that their attitude to the Alliance was coloured by their awareness of another, pre-existing, between-schools improvement partnership which was seen to be more suited to their needs and goals (Atkinson et al., 2007). This competition for classroom staff's attention was compounded in Year Three of the Alliance's operations when the second, Cohort 4 local teaching school alliance was formed, taking in some of the original Alliance's schools. This finding is in line with an evaluation of the various forms of collaborative working available to English schools, which dubs the persistence of this culture of competition "chain wars" (Chapman, 2013, p.347). The micro-political dimension is not automatically destructive of collaboration, however: if actors' interests can be aligned inside the partnership, then a collaborative dynamic can be established which contributes to collective improvement (Piot & Kelchtermans, 2016). This is what seems to have happened in the pre-existing improvement partnership, where relatively close alignment was achieved on issues concerning the improvement of student performance. Success of this sort could be seen as founded on a strong 'innovation infrastructure' which supports sustained and continuous improvement (Peurach, 2016). But a similar degree of alignment could not be established within my subject Alliance. Respondents to my survey indicated that they were not willing to commit themselves to the activities that the Alliance's leadership chose to offer, and attendance data

suggest that few people saw those activities as aligning with their interests or goals, at least in the domain of professional development.

Agreeing collaborative **goals** has indeed been identified as a persistent problem in between-schools working (Simon, 2015), as it is in business partnerships and alliances (Vangen & Huxham, 2003). Just as Husbands asks, "What is the problem to which teaching schools are the answer?" (2015, p.31), so the leaders of my subject Alliance did not establish sufficiently clearly in the minds of classroom staff the goals and needs which the Alliance was intended to address. Simon (2015) proposes a loose, flexible and non-authoritative 'implementation system' for between-schools collaboration, where decisions to participate or not are 'fuzzy' and based on consent and negotiation on a goal-by-goal basis. My subject Alliance did not adopt such a structure, but instead organised itself hierarchically with decision-making and direction-setting concentrated in few hands. Given my findings on the importance of agency to my respondents, and in the context of the literature on effective professional development, it is not surprising that many classroom staff felt that this format for collaboration could not help them.

In the following section, I discuss how far my subject Alliance met cultural requirements for successful collaboration.

5.3.2   <u>How far did the Alliance meet cultural requirements for successful collaboration?</u>

The attitudes, beliefs, expectations and relationships of classroom staff (that is, their 'culture') (Fullan, 2001a) are fundamental factors in the success or failure of collaborative working in education (Ford & Youngs, 2017). A genuinely collaborative culture evolves as members define and develop their purposes as a community, though that process may require some formal facilitation at its outset (Hargreaves & Fullan, 2012). It is different from 'contrived collegiality' which reinforces administrative control over staff interactions (Hargreaves & Dawe, 1990); nor is it found in superficial exchanges of help, support or assistance (Stoll, Bolam, McMahon, Wallace & Thomas, 2006). Collaborative culture includes a willingness to take collective responsibility for improvement (DuFour & Mattos, 2013).

In the current educational climate in England, it might appear to an observer that the facilitation and evolution of a genuinely collaborative culture faces significant obstacles. The dominant **national educational culture is competitive**, such that actors' interests cannot be aligned across the system because schools and individuals have inward-looking goals (Greany & Allen, 2014). These goals are driven by the 'quasi-market' mechanisms of accountability that sit in constant tension with the hybrid mix of state- and locally-led networks that are designed to facilitate school improvement (Gronn, Vignoles & Ilie, 2017).

Classroom staff's experience at school level is said to be predominantly of the demands of performativity, monitoring and ranking; of the pressure of school inspection judgements and the 'what works' agenda; and of the rights assumed by school leaders to direct employees' learning and training (Kennedy, 2014b; Lofthouse & Thomas, 2017). This analysis is echoed in the data that I collected in all three iterations of my survey, leading me to deduce that efforts to develop collaborative work between schools by my subject Alliance suffered from the countervailing demands of the dominant culture of competition that Keddie (2014) and Higham et al. (2009) identify as a barrier to deep collaboration.

However, in some instances the school-focused culture of leaders directing their staff's professional learning was countered by a **willingness in individuals** to work collaboratively with staff from other schools. In this sense, smaller subject departments (such as Art, Design Technology, and Drama), in which staff may have felt isolated in their own schools, tended to report a more collaborative attitude to working with staff from other schools than larger subject departments which did not often work in this way. Staff in special schools reported a similar willingness, although this work did not come within the ambit of the Alliance. The higher level of 'partnership competence' evident in Art and Design Technology was supported to a significant degree by the energy and initiative exercised in each case by a particular subject leader who organised between-schools activities and recruited participants by direct invitation and reminder. In the case of Drama, a well-known local theatre hosted a series of Alliance-wide events led by a prestigious external contractor. The collaborative culture in Drama that is founded on the social nature of the arts (Barton & Baguley, 2014) may have helped to attract a comparatively large number of participants to these activities. An additional reason for the success of small-subject events is that they offered something that was perceived by participants to answer a need, but that could not otherwise be found locally. This could be understood as an instrumental reason for participating (taking a practical step to achieve a specific goal), and also as a cultural explanation (believing that working with others is a key element of one's own practice).

Teacher **resistance to change** has been called "a perennial phenomenon which all school reforms in the past have had to deal with" (Terhart, 2013, p.489). Cain (2017) suggests that teacher resistance manifests as a denial of or opposition to the educational innovation. An explanation for the particular case of resistance found in my research might lie in the notion that school-level interests remain dominant in instances of inter-school working (Piot & Kelchtermans, 2016). The majority of respondents to my survey did not reject collaboration *per se*, and both questionnaire and interview data show a willingness to work with others that suggests a positive cultural attitude to collaboration. However, for most respondents this was usually undertaken **within their own school**, and most often within their own subject department or team. As much of the research into PLCs and other forms of collaborative

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working suggests, the most fertile ground for establishing and developing deep collaboration between individual classroom staff is their own school (Doğan & Yurtseven, 2017), where school leaders can provide facilitation most easily (Ford & Youngs, 2017), and the bounded nature of the conventional school community means that colleagues working in the same school already have the relational ties or 'social capital' necessary to foster effective collaboration (Granovetter, 1973, 1982; Lin, 2001). This third building block of successful collaboration is discussed in the following section.

5.3.3   How far did the Alliance meet relational requirements for successful collaboration?

Relational requirements for successful collaboration between schools are similar to those identified as necessary to effective alliances, networks and partnerships in business (Hutt, Stafford, Walker & Reingen, 2000) and in health care (Scott & Hofmeyer, 2007). Trust, equitable community connections, shared commitment, and communication and information sharing are important features of the relational building block of educational collaborative networks (Díaz-Gibson, Civis-Zaragoza & Guàrdia-Olmos, 2014). From the perspective of innovation diffusion theory (Rogers, 2003), communication channels are necessary to the spreading of an innovation through a social system, both at a formal, patterned level and at an informal, interpersonal level.

The failure of the Alliance's leaders to communicate effectively with the majority of classroom staff has already been discussed above in section 5.2.1 (concerning business-based models of change) and in section 5.2.2 (concerning education models of change). The teaching school alliance innovation was not formally presented by system or school leaders with sufficient clarity or dynamism to persuade many people to adopt it. The influence of **opinion leaders and change agents** in the social system was not widely evident, although a few charismatic individuals did generate a comparatively strong response among fellow specialists in small, 'niche' subjects. This evidence may indicate that people working in the same subject specialism perceived an informal relationship between themselves that was more equitable, and possibly more trusting, than the formal, hierarchical relationship between school leaders and classroom staff. This commitment to collaboration between staff in different schools is echoed in evidence gathered from staff in special schools, who said that they are strongly willing to work with other special schools because they feel isolated in the local, mainstream educational system. But this degree of positive relational connection was not seen in most subject-based cohorts, and little communication between mainstream schools was reported. Where it did occur, it was founded on pre-existing, individual relationships such as having previously worked together in the same school.

Cornelissen, McLellan and Schofield (2017) argue that **informal, social structures** and interpersonal relationships are as important as formal partnership structures in enabling collaborative learning. Data collected by the three iterations of my survey suggest, as I discuss above in section 5.3.2, that relational ties within respondents' own schools, and usually within their subject department or team, were most influential in the instances of collaborative working that they reported. This is borne out to an extent by data on respondents' discussion of professional development in their personal social groups. In Year Two and Year Three, more people reported discussing this issue within their own school than with contacts outside their school. However, a different version of this question in Year One drew a contradictory response: more people reported discussing the Alliance and its work outside their school than within it. The latter evidence may suffer from 'demand characteristics' bias (Nicols & Maner, 2008) as I discussed in Chapter Four, but it might suggest that the paucity of information about the Alliance given to classroom staff in Year One could have led some respondents to ask their contacts in other schools whether they knew anything about it. The data might also refer to conversations with fellow attendees at Alliance-generated events. But the comparatively small percentage of respondents who reported discussing either issue 'quite a lot' or 'very much', and the modest mean score for this question about social group contacts, indicates that contact at the inter-personal level regarding collaboration between schools in the Alliance was limited overall, and was confined to respondents' own schools for a significant number of those who did discuss the matter. I therefore suggest that a lack of social group contacts beyond the walls of classroom staff's own school is a barrier to between-schools collaboration.

It appears that the relational building block for collaboration remained under-developed during the first three years of the Alliance's operations, with the exception of small groups of like-minded subject specialists, and staff in special schools, who saw value in a shared, equitable and trusting approach to their professional development needs. These instances could be said to be the closest the Alliance came to the goal of 'joint practice development' or JPD through the professional development activities that it generated.

In the next section, I use the findings from my mixed-methods, iterative, sequential case study to develop an emergent theory of why classroom staff may choose to adopt or not to adopt innovations for educational improvement in a collaborative setting. This theory offers policy-makers, practitioners and researchers an important insight into classroom staff's attitudes to those educational improvement efforts which exploit various forms of between-schools partnership.

5.4 Building an emergent theory

The emergent theory that I derive from my research evidence is represented in this section in Figure 5.1, shown below. I theorise in three levels the 'change ecology' (Bronfenbrenner, 1979, 1989; Bronfenbrenner & Morris, 1998) of influences on classroom staff's attitudes to change in a collaborative setting. I suggest that this 'change ecology' can help develop understanding of why staff take up or do not take up professional development opportunities offered by a between-schools partnership.

5.4.1 Building an emergent theory from my collective case study

Because my research design is the case study, which focuses on understanding the dynamics present within single settings (Eisenhardt, 1989), and because of the concerns over generalisability and replicability that the case study frame raises (Yin, 2009), I can claim only that my emergent theory seeks to represent what I inductively interpret the respondents to my particular survey to be saying about their attitudes. However, my study of a single teaching school alliance is a *collective* case (Gall et al., 2007) because it uses a sample of eight different schools, each itself a separate case: the multiple nature of my sample could be said to improve the reliability of my findings because I can cross-test deductions between cases within my collective sample (Eisenhardt, 1989). My emergent theory is a close fit with the empirical data that I analysed in detail, and compared between iterations, in Chapter Four of this thesis. In the preceding sections of this chapter, I follow the process of "iterating toward a theory" (Eisenhardt, 1989, p.541) by testing my insights against different approaches to the data from the perspectives of change management in business organisations and in education, and of collaborative working. As a result of this careful iterative cross-checking, I believe that I can claim empirical validity for the emergent theory that I present in this section.

5.4.2 Micro-level: Attitudes to own professional development

I locate my first major construct of **attitudes to own professional development** on the innermost or micro-level of my model, as shown in Figure 5.1 below. From the perspective of Wejnert's (2002) integrated theory of the diffusion of innovations, this is the **adopter** dimension where the characteristics of actors influence the probability of adoption of an innovation. This construct is proposed in response to my research sub-question (1), *'How do innovations in professional development spread or not spread among classroom staff in the Alliance?'* The micro-level is the first to be considered in explaining innovation diffusion in my subject case because my questionnaire and interview data suggest that classroom staff

see the dimension of their own professional development as the most immediate and pressing in their attitudes to change efforts. The micro-level of my proposed 'change ecology' therefore deals with individual and personal considerations that colour actors' responses to the further levels in my framework. The items that I have grouped under this construct are:

- **agency** – choosing how to meet individual needs and goals
- **relevance to practice** – does the innovation have overt relevance to daily work, including focus on pupil outcomes?
- **aligning beliefs and behaviours** – matching what you think to what you do
- **domains of activity** – how much time is spent on hierarchical development compared to heterarchical development?

Following up an indication of the problematic concept of **agency** in my Year One questionnaire (see section 4.2.6 of Chapter Four), interview evidence in all three iterations (see sections 4.2.13, 4.3.13 and 4.4.13) suggested strongly that classroom staff did not feel that the individual was placed at the centre of the professional development activities they experienced, contrary to a wide range of research on effective professional learning (Guskey, 2002; Desimone, 2009; Opfer & Pedder, 2011; Evans, 2014). They reported a perceived lack of agency in determining their own professional development, contrary to the mounting research evidence that this factor is crucial to effective and sustainable change (Pyhältö, Pietarinen & Soini, 2014; Philpott & Oates, 2016; Tao & Gao, 2017). I therefore judged that agency of the individual was an important item to include at the micro-level of my ecological model of change because, in this instance, it appeared to be a significant barrier to the Alliance's work in the professional development strand.

Closely related to agency, the issue of **relevance** to their own practical needs of the Alliance's work was raised by a number of interviewees (see sections 4.2.15, 4.3.15 and 4.4.15), who could not see why the innovation should be 'normalised' and embedded into their day-to-day practice (Wood, 2017) if it offered only a 'supermarket' approach of activities which mostly did not meet individuals' perceived needs (Cordingley et al., 2015; Gu et al., 2015). This was therefore another important item to include at the micro-level.

A major finding of my questionnaire in all three iterations was the significant discrepancy respondents saw between supporting change in principle and enacting it in practice (see sections 4.2.5, 4.3.5 and 4.4.5). This issue can be conceptualised as the problem of **aligning beliefs and behaviours** in change efforts (Brown & Zhang, 2016; Sales, Moliner & Amat, 2017). Collaborative, agential development activities were reported in interviews as being infrequent and largely limited to the individual's own team or department, even though

interviewees expressed support for the principle of collaborative development (see sections 4.2.12, 4.3.12 and 4.4.12). The emergence in my data of this barrier to change suggested that I needed to include this item at the micro-level in my change model.

Linking all three of the factors above is the persistent and widely-reported issue of classroom staff's professional development activity being largely in the **hierarchical domain** (Antoniou, Kyriakides & Creemers, 2015; McNeill, Butt & Armstrong, 2016) (see sections 4.2.13, 4.3.13 and 4.4.13). A wide range of research has identified the hierarchical approach as a significant barrier to developing individuals' practice, and heterarchical activities have been shown to be a more effective and sustainable route to change (Fullan, 2001a; Fielding et al., 2005; Hargreaves, 2003, 2011; Pedder, Storey & Opfer, 2008; Kennedy, 2011; Greany & Maxwell, 2017). The proportion of development time spent in each domain, hierarchical and heterarchical, therefore appeared to be an important item to include at the micro-level of my model.

Both my own data and a wide range of recent research suggest that, without a positive response to an innovation by individuals at this micro-level, there appears to be little hope of its successful adoption through a school or across an education system.

5.4.3   Meso-level: Attitudes to change

The second major construct of my emergent theory, which I locate in the model as the middle or meso-level, is **attitudes to change**. In Wejnert's terms, this is the dimension of environmental **context** that modulates diffusion via characteristics of the actors' external settings. This construct responds to my research sub-question (2), *'What are the facilitators and barriers to the spreading of effective practice among classroom staff in Alliance schools?'* Here I deal with the moves necessary to spread and embed change in an organisation, applied to my collective case specifically to mean educational improvement via the professional development of classroom staff. The meso-level of my proposed 'change ecology' therefore represents attitudes to change in the context of an individual's own school. The items that I have grouped under this construct are:

- **surrendering the status quo** – classroom staff have an appetite for change
- **participant-led** – classroom staff who are to enact change feel that they own it
- **communicating positive vision** – change leaders work to achieve staff buy-in
- **normalising change** – new practices are embedded into staff's day-to-day work.

Current thinking in the field of organisational change suggests that nothing can happen unless members of the organisation accept the need to **surrender the status quo** (Bridges, 2003; Schein, 2004; Kotter, 2012, Hayes, 2014). My questionnaire evidence found a widespread recognition of the importance of change (see sections 4.2.6, 4.3.6 and 4.4.6), a positive attitude which was consistently supported by interview evidence (see sections 4.2.12, 4.3.12 and 4.4.12). This key element in both the process and the implementation of change was thus a significant item to include at the meso-level of my ecological model of change in educational settings.

A positive attitude to change in principle needs to be harnessed in practice so that change can be enacted (Kotter, 2012), which is said to be done most effectively when organisational members are themselves change agents (Monnot, 2016). The change effort thus needs to be **participant-led**: in schools, the classroom staff involved need to feel that they own the change that they enact because they will then value it more (Coleman, 2011; Campbell et al., 2013; BCG, 2014; Mujis et al., 2014; Greany & Maxwell, 2017). This widely-recognised factor therefore appeared to be an important item to include in my model at the meso-level.

The literature of organisational change emphasises the importance of leaders **communicating their vision** of change so that staff 'buy in' to the change effort (Bridges, 2003; Schein, 2004; Kotter, 2012; Hayes, 2014). My questionnaire data suggested that, in terms of knowing about the Alliance and understanding what it was for, a positive vision had not been communicated to classroom staff (see sections 4.2.7, 4.3.7 and 4.4.7). This finding was confirmed by interview evidence, where interviewees almost entirely uniformly claimed no knowledge of the Alliance or its activities (see sections 4.2.14, 4.3.14 and 4.4.14). The failure to promote knowledge of the innovation (called 'reach' in innovation diffusion terms) and to achieve staff buy in (called 'significance') appeared to be an important barrier to change in this instance which needed to be included in my model at the meso-level.

Change in schools cannot be sustained if new practices are not **normalised** or embedded in classroom staff's day-to-day work (Lieberman et al., 2016; Doğan & Yurtseven, 2017; Wood, 2017). There is likely to be a degree of risk aversion among some staff (Renfrew et al., 2009; Sutch et al., 2008) which leads to resistance to change, possibly for reasons that those involved consider ethically defensible (Piderit, 2000). Evidence collected by the second and third iterations of my questionnaire (see sections 4.3.6 and 4.4.6) indicated little progress in embedding the practice of collaborative, heterarchical development work as envisaged in the theory of a 'self-improving school system' (Fielding et al., 2005; Hargreaves, 2011; NCSL, 2012a; NCTL, 2014). This finding was largely confirmed by interview data, with the exception of special schools which tended to approach professional development differently from mainstream schools (see sections 4.3.13 and 4.4.13). Given the central importance of

this practice change to the teaching school alliance model, it was clearly necessary to include the item in my model at meso-level.

Both recent research and my questionnaire and interview data suggest that positive response to change in principle, and belief that it is necessary and attainable in practice, are required at the meso-level in order to make a success of the unfamiliar challenge of effective, sustainable partnership working between staff in different schools (which is the third, and outermost, macro-level of this 'change ecology').

5.4.4   Macro-level: Attitudes to collaboration

The third major construct proposed by my emergent theory, which I locate in the 'change ecology' outside the first two constructs as a further, macro-level layer, is **attitudes to collaboration**. In Wejnert's terms, this is the dimension where characteristics of the **innovation** itself influence the adoption process. This construct responds to my research sub-question (3), *'How is the Alliance seen by staff in its member schools?'* In my collective case, the macro-level deals both with the ideal of networked professionalism embodied in the theorisation of a 'self-improving school system' (Hargreaves, 2010), and also with the practical requirements to get staff in different schools to work effectively together for improvement across the whole system (Gu et al., 2012; Bell et al., 2013). The items that I have grouped under this construct are:

- **structural** – size of network, geography, agreed goals, micro-politics
- **cultural** – commitment to co-construction versus isolation due to performativity agenda, willingness in individuals to collaborate versus focus on own school
- **relational** – active change agents, informal social structures, trust, equitable community relations.

My interview evidence consistently suggested that the **structure** of the Alliance was problematic in several respects (see sections 4.2.15, 4.3.15 and 4.4.15). Research has identified the size (Atkinson et al., 2007) and cohesion (Hallinger & Heck, 2011) of a network as influencing its effectiveness, both of which may affect the agreeing of collective goals (Simon, 2015). Likewise, the prevalence of micro-political rivalry between network members and between different networks can obstruct collaboration (Coleman, 2011; Chapman, 2013; Piot & Kelchtermans, 2016). It was thus clear that structural considerations needed to be included in my ecological model of change at the macro-level.

The **culture** of the classroom staff involved is crucial to the success or failure of collaborative work between them (Ford & Youngs, 2017). My evidence strongly suggested (see sections 4.2.15, 4.3.15 and 4.4.15) that many interviewees saw themselves as isolated from staff in other schools due to the demands of the currently dominant performativity agenda (Greany & Allen, 2014; Kennedy, 2014b; Lofthouse & Thomas, 2017; Greany, 2018). Even though questionnaire evidence (see sections 4.2.5, 4.3.5 and 4.4.5) suggested a commitment in principle to collaborative, co-constructed development work (Jackson & Temperley, 2006; Harris & Jones, 2017), respondents mostly did not see the Alliance as an attractive vehicle for it. Cultural considerations therefore needed to be included as an important item at the macro-level of my model.

The **relational** requirements for collaborative networks in education (Díaz-Gibson et al., 2014) place focus on the pivotal social dimension of effective between-schools activity (Cornelissen et al. 2017). Due to the failure by its leaders to communicate a compelling vision of the Alliance to classroom staff (see sections 4.2.7 and 4.2.17, 4.3.7 and 4.3.17, and 4.4.7 and 4.4.17), there was limited evidence of opinion leaders and change agents persuading their colleagues to adopt the innovation (Higham et al., 2009; Monnot, 2016; van der Heijden et al., 2015). Establishing trust between actors may have been problematic in this regard (Gregory, 2017), and creating equitable community relations beyond the walls of staff's own schools proved difficult (Doğan & Yurtseven, 2017; Piot & Kelchtermans, 2016). The clearly significant barrier to adoption that this factor represents meant that I needed to include it as an item at the macro-level.

5.4.5   <u>An emergent theory to explain why classroom staff choose to take up or not to take up professional development opportunities offered by a between-schools partnership</u>

The evidence that I collected via the three iterations of my mixed-methods research design suggested that an individual's adoption decision pathway was not necessarily linear or sequential from one level to the next. I therefore argue that all three levels in this 'change ecology' played a part when an individual chose whether to take up or not to take up professional development opportunities offered by the Alliance. The difficulty of successfully navigating the three levels of influence, and so of reaching a positive adoption decision, is demonstrated by the very small number of people who took part in Alliance-generated activities compared to the much larger number who did not take part (see sections 4.3.8 and 4.4.8).

In designing a graphical representation of my emergent theory, I have drawn on Bronfenbrenner's ecological models of human development (1979, 1989) because his work recognises the influence of the actual environments in which people live, which are seen to

function on multiple and inter-connected levels. This conceptual and operational framework is particularly useful for building theory from my case study of a new, unresearched organisation which I observed empirically and analysed inductively. I have used an ecological framework to argue that classroom staff's adoption decision regarding the teaching school alliance innovation was influenced at three different but connected levels (the micro-, the meso- and the macro-levels) by the personal, contextual and systemic factors that I have discussed in this section.
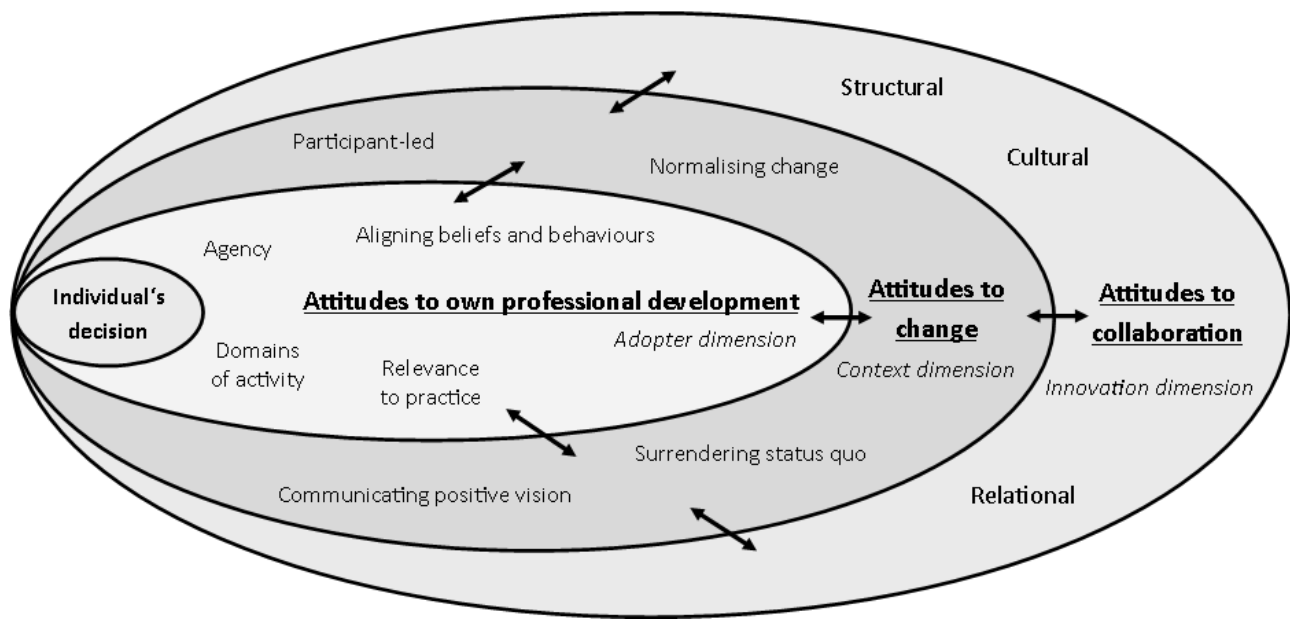

Figure 5.1: An emergent theory to explain why classroom staff choose to take up or not to take up professional development opportunities offered by a between-schools partnership

The diagram above is designed to help policy-makers, practitioners and researchers to understand why classroom staff might choose to take up or not to take up the professional development opportunities offered by a teaching school alliance. I suggest that the decision is likely to be made on an individual basis by each teacher or classroom assistant, influenced to varying degrees and in varying configurations by the following dimensions which form nested levels in each individual's 'change ecology':

Micro-level   the *adopter* dimension: attitudes to change in their individual practice (that is, attitudes to their own professional development);

Meso-level   the *context* dimension: attitudes to how change is introduced, spread and embedded in their own school;

Macro-level   the *innovation* dimension: attitudes to collaborative working in their own school and beyond.

I argue that the macro-level layer of collaborative working that is added by a 'self-improving school system' to the already complex ecology of change seems to be challenging to classroom staff's attitudes to their own professional development. In theory, "in a system of schools linked in a network, it ought to be easy for one teacher to contact another as a source of good practice" (Hargreaves, 2003, p.58), but in practice this contact seems to happen close to the individual's locus of work if it happens at all. Where time is short in general, and time for development activity is at a premium in particular, it is not surprising to find that most classroom staff responding to my survey did not perceive my subject Alliance as having appreciable influence on their professional development. The Alliance did not achieve take-off in adoption of between-schools development activity, and its work was ignored by a large majority of the classroom staff in its member schools. I suggest that this is an example of the failure of the rhetoric of collaboration to produce added value in practice (Huxham & Vangen, 2005). In the light of the difficulties experienced by my subject Alliance in establishing itself and promoting change through professional development, in Chapter Six I go on to discuss the future of this particular model of school partnership.

In the next section of this Chapter, I discuss limitations of my study.

5.5   Limitations of the study

5.5.1   <u>Case study research design</u>

Because my research design is the case study, which focuses on understanding the dynamics present within single settings (Eisenhardt, 1989), and because of the concerns over generalisability and replicability that the case study frame raises (Yin, 2009), I can claim only that my research presents my interpretation of what my particular respondents chose to tell me about their experiences of the subject Alliance. The 'case' is specific to the subjects: it is 'their' situation which is being investigated and it has to be approached as a reality which the participants define (Pring, 2000). My research is thus case-specific to a significant degree.

5.5.2 Sample size and composition

The limitations on scope and duration imposed by being a part-time researching professional meant that I had to select a purposive sample of eight schools from the 22 secondary and special schools belonging to the Alliance in 2014. The sample population of classroom staff (471 qualified teachers and 257 non-QTS teaching assistants) represented 37% of the Alliance total. It is not clear that a larger sample size is necessarily 'better' than a smaller one; a more important consideration seems to be what the researcher does with the available sample (Baker & Edwards, 2012). My sample returned a total of 709 questionnaires over three years, which produced as much data as I could reasonably handle in the time available.

Because participation was voluntary and completely anonymous, however, the QUAN sample was not uniform from one iteration of the questionnaire to the next, and I could not track an individual's answers through the iterations. It is therefore not possible to claim a statistically significant relationship between the three annual quantitative data sets. It might also be that respondents did not give accurate answers due to the reduction in accountability offered by complete anonymity. These are significant limitations on my interpretations of questionnaire data, particularly when comparing one iteration of the questionnaire with another.

In the QUAL interview phases, the sample population was also self-selecting in that respondents to the questionnaire provided an email address to indicate willingness to participate, and then needed to agree to give me a face-to-face interview. The total number of interviewees was 23 who gave a total of 30 interviews (a small number were interviewed in more than one iteration). It has been suggested that this is an adequate sample size for an inductive approach (Baker & Edwards, 2012). The composition of the interview sample was skewed towards middle leaders (12 out of 30 interviews); there were few classroom teachers (7 out of 30) in comparison to their number in the sample total, and only one non-QTS teaching assistant. The voices of classroom staff were thus not heard as clearly or, probably, in as great a variety as I should have liked.

5.5.3 Response rates

I have discussed in detail the response rate of each iteration of the questionnaire in Chapter Four. In general, I was disappointed with response rates to my questionnaire, particularly in Year Three, even though the rates I obtained are comparable to similar studies (Sturgis, Smith & Hughes, 2006; Kaplowitz, Hadlock & Levine, 2004). In most instances, I did not inspire a sufficient level of interest in my research among the 'gatekeepers' to each school's

staff (usually the headteacher or another nominated senior leader) for them actively to encourage their colleagues to participate. I could not communicate freely and directly with my sample population because of the etiquette of dealing with someone else's school. This elongated permission chain probably caused a significant reduction in response. Another important factor was probably staff's overall workload (a factor mentioned by several interviewees regarding their adoption of the teaching school alliance innovation), which may have caused my questionnaire or interview request either to be ignored, or to be shelved until it was too late to respond.

5.5.4. <u>Incomplete information on event attendance</u>

I decided quite late in Year One to collect attendance figures for Alliance-generated professional development events, because it became clear following analysis of questionnaire responses and interviews that such data would be useful for the triangulation of those responses. These figures were not at that point being collected by Alliance leaders or administrators. I therefore depended on the willingness to respond, and on the accurate recall, of individual event co-ordinators to gather this information; some figures were not made available or were best guesses. In Year Three, the final tranche of attendance figures was not collected due to my own workload.

5.5.5 <u>Comparison with other teaching school alliances</u>

Although my research design is a case study of a single organisation, it would have been instructive to compare directly my findings for my subject Alliance with the experiences of other teaching school alliances. I could have investigated whether the facilitators and barriers to the teaching school alliance innovation that I identified are unique to my subject case or have been more widely encountered. These insights would have given my emergent theory a firmer empirical grounding on a broader corpus of evidence.

However, I did not succeed in persuading leaders of neighbouring alliances to grant me access, possibly due to the limiting effects of their own and their staff's workloads, and possibly due to the persistent culture of competitiveness that I discussed earlier in this Chapter. I have had to content myself with comparative reference to second-hand accounts of other alliances' activities in the work of Gu et al. (2012, 2014, 2015), Armstrong (2015), Chapman (2013), Matthews & Berwick (2013), NCSL (2012a, 2013) and NCTL (2014). These accounts are necessarily selective, and in the case of the National College are uncritical celebrations of the teaching schools project, but they have afforded me insight into

a wider range of experiences than I could have achieved in person, even if my requests for direct access to other alliances had been granted.

5.6 Suggestions for further research

The limited nature of this case study means that several important aspects of the teaching schools experiment have not been fully addressed. I suggest that future research might profitably focus on:

- detailed comparative study of teaching school alliances
- relationship of teaching schools to multi-academy trusts
- experiences of classroom staff in mature alliances and other between-schools partnerships, particularly regarding their own professional development.

These areas are discussed in the following sections.

5.6.1 Comparative study of teaching school alliances

It is clear from my research that not every teaching school alliance has enjoyed the sort of success celebrated by the National College's publications. Evidence of what some alliances have been doing has to date largely been confined to a series of vignettes. A systematic, detailed comparative study of alliances which have experienced differing degrees of success would lead to better operational and theoretical understanding of what needs to be done and what needs to be avoided when undertaking effective and sustainable collaborative work between schools.

5.6.2 Relationship of teaching schools to multi-academy trusts

I discuss in Chapter Six the apparent rise of multi-academy trusts as the new policy preference for between-schools improvement work. The relationship between the two models is not yet clear; nor has a comparative analysis of their benefits versus costs been undertaken. In a difficult funding climate for education in England, it may be that multi-academy trusts do not necessarily offer a more cost-effective means of improving pupils' outcomes in a collaborative setting than do teaching school alliances. I suggest that future research should address the issues of purpose, activities, structures, leadership, and impact that can be observed in the two models.

5.6.3 <u>Experiences of classroom staff in mature alliances and other between-schools partnerships, particularly regarding their own professional development</u>

The research reported in this thesis deals with the first three years of my subject Alliance's work on professional development, and I found evidence of teething problems which reduced its effectiveness in its initial period of designation. Similarly, other researchers' work published to date is necessarily limited to early evidence – the first cohort of teaching schools is only five years old at the time of writing, and most are younger than that. Initial problems might be overcome with time and greater experience, or the direction of travel may change and with it the means employed to reach fresh goals. A useful focus of research would therefore be to investigate mature collaborative organisations, both alliances and other forms of between-schools partnership, which may have developed in unexpected or innovative ways. In particular, further development of my research would include a return to my subject Alliance at a later date to ask what classroom staff think and do about their own professional development at that point.

In the final Chapter of this thesis, which follows, I summarise my findings and locate my research in the policy and practice landscapes. I end with some brief reflections on the research process and on my own development as a researching professional.

Chapter Six
Conclusions

6.1 Summary of findings

The research that I have reported in this thesis has produced the following key findings regarding classroom staff's decisions to adopt or not to adopt the innovation of professional development opportunities offered by a teaching school alliance. My unique contribution to the field is to build an emergent theory from my case study, which I represent graphically in section 5.4 of Chapter Five. This explanatory framework constructs the influences on an individual's innovation adoption decision as a 'change ecology' consisting of three levels: the micro-, meso- and macro-levels.

The three key findings that emerge from my multi-strand, sequential, mixed-methods case study of the influence of a teaching school alliance on classroom staff's professional development are:

> *(1)* Classroom staff report prioritising personal and individual considerations when choosing whether or not to take up professional development opportunities offered by the subject Alliance. These considerations include the relevance of the innovation to their own practice; the degree of agency they have in meeting individual needs and goals; the degree to which their beliefs about change can be aligned with behaviours; and the amount of time they have available to spend on change activity, most of which is directed by their school leaders. I locate this finding in my explanatory framework at the *micro-level*, equivalent in innovation diffusion terms to the dimension of the adopter (where the characteristics of actors influence the probability of adoption of an innovation).

> *(2)* Classroom staff report a positive perception of change in principle: they say they are willing to surrender the status quo, and they report an appetite for improvement. However, the management of change in schools can act as a barrier to the spreading of effective practice. Classroom staff need to feel that they own the change if they are to buy into it. If they do not perceive that their individual needs and goals are being addressed, then innovations are less likely to be embedded into their practice. I locate this finding in my explanatory framework at the *meso-level*,

equivalent in innovation diffusion terms to the dimension of environmental context (where characteristics of the actors' external settings modulate diffusion).

(3) Classroom staff report a positive attitude towards collaboration for improvement, although this is chiefly at the level of their own school, subject department or team. System-level collaboration is seen more neutrally: while the strands of teaching school alliance activity are thought to be worthwhile in principle, classroom staff do not regard *this* Alliance as important to their own professional development. I locate this finding in my explanatory framework at the *macro-level*, equivalent in innovation diffusion terms to the dimension of the innovation itself (where characteristics of the innovation influence the adoption process).

My overall finding is that my subject Alliance appears to have failed to spread and embed change via the professional development of classroom staff in its member schools. My emergent theory to explain this finding is founded on a case study of a single teaching school alliance, but is related to other forms of between-schools working and is framed by the existing literatures of change and of collaboration. It can thus be applied on a broader scale to the overarching concept of collaboration for educational improvement, not only to the teaching school alliance model itself. I suggest further that the levels of influence on classroom staff's attitudes to change that I have identified could be considered when planning and implementing other change efforts in education, and that my contribution is therefore of interest to policy-makers, practitioners and researchers on a wider stage.

6.2   Impact of my research

In this section I consider the impact of my research. I try to estimate my work's 'reach' (how wide the audience is) and 'significance' (how much difference it makes to the audience). I organise my discussion according to the means of communication that I employed to address my various potential audiences.

6.2.1   Annual reports to Alliance leaders

As part of my funding agreement with the original leader of the Alliance, who was also my headteacher, I provided to the Alliance leadership a report on my findings for each of the three iterations of my survey. Their intention in requesting this document was to secure a contribution to the Alliance's self-assessment process: the steering group could show the designating authority (the National College) that it was asking for feedback from staff in member schools in a coherent and rigorous manner. As I have discussed in Chapter One section 1.6, this intention represented the 'situation-oriented' aspect of my research (Noffke, 1997; Rearick & Feldman, 1999), with a strongly local and instrumental bias towards the 'real world' in 'real time' (Costley, 2013). A danger of this positioning was that I might feel obliged to tell the Alliance's leadership what it wanted to hear (Rossman & Rallis, 2012). But my headteacher stated clearly to me that he intended that I produce a 'warts and all' assessment of the Alliance's work in CPD, so that points for improvement could be identified and acted upon. Delivery of each report was supported by a discussion of its findings and recommendations with Alliance leaders. In Years One and Two, this was with my headteacher; in Year Three, following my head's retirement and the transfer of Alliance leadership to another school, I met the deputy head of that school who had been delegated the task of running the Alliance's CPD strand. In this sense, the 'reach' of my research was to influential practitioners who were in a position to act on my recommendations if they so chose.

Each report opened with a relatively brief executive summary of the inferences that I had drawn from my findings, and included recommendations for consideration by the Alliance's steering group. An example of an executive summary section of an annual report can be found in Appendix 3. I went on to give detailed analysis of both quantitative and qualitative data for that iteration, in much the same format that I have used to report my findings in Chapter Four of this thesis. I did not expect this audience to spend much time reading through the detailed analysis of findings, so the executive summary was clearly the most significant part of each document.

On reflection, I do not think that the 'significance' of my work in this format was high: my recommendations were mostly not acted upon by Alliance leaders. The exception was the suggestion that one-off, high-profile events with a prestigious external speaker could offer classroom staff something not available elsewhere: in Year Two, a GCSE English conference run by an exam board attracted a large audience, and in Year Three this was replicated with a GCSE Science conference. Perhaps encouraged by these successes, in Year Four (which lies outside the scope of this research) a conference on women in educational leadership was held. But I cannot say that these specific events were my idea. My lack of direct impact on the CPD work of the Alliance is disappointing, but perhaps understandable given that I was largely pointing to what I interpreted as failures and omissions. The situation was probably exacerbated by micro-political tensions when leadership of the Alliance switched to a different school at the start of Year Three: I did not enjoy the same levels of access or trust that I had with my own headteacher. I began my doctoral research by acknowledging my positioning as an 'individual expert' who had to guard against my findings being appropriated by those commissioning my research (Lam, 1997), but as it turned out my findings were largely ignored rather than appropriated.

6.2.2   Publication by academic journal, online repository and blog

In an effort to disseminate my work in accessible formats to the wider academic community (Kamler, 2008), in 2015 I wrote an article of about 4,000 words which focused on my Year One findings, intended for publication in a peer-reviewed academic journal. The article was accepted by the journal *Management in Education*, and in December 2015 was published online with the title "Professional development and the teaching schools experiment in England: leadership challenges in an alliance's first year". Hard copy publication followed in the January 2016 edition of the journal (*Management in Education*, 30(1), 29-34). Two researchers with interests in the same field were kind enough to make contact following publication. Completely unexpectedly, the article was selected for the 'MiE Best Paper Award for 2016', which was presented to me at the BELMAS Annual Conference in July 2017. This outcome might conceivably increase the 'reach' of my research on this topic, as further reads could be generated by the publicity surrounding the award, but I have recorded no citations of my article yet .

I also uploaded to the online open repository ResearchGate the final author's version of the journal article, plus versions of the annual reports to Alliance leaders as 'working papers' for my research project. As of May 2017, the number of reads of this material totalled 71. I recognise that some of these reads may represent multiple downloads by the same person,

but nonetheless I judge that I can reasonably claim some interest in my work among the wider academic community.

Following publication of the journal article, I was invited to submit a shorter version of my findings to the BERA Blog 'Research Matters' strand, which was published online in April 2016 at *https://www.bera.ac.uk/blog/professional-development-and-the-teaching-schools-experiment-in-england-leadership-challenges-in-an-alliances-first-year*. I have not yet been able to find the figure for hits on this page, but I hope for a modest degree of 'reach' via this platform.

Future publication plans include the preparation of journal articles based on elements of my thesis. I aim to present my findings on classroom staff's attitudes to change in a collaborative setting, and the unique contribution of the emergent 'change ecology' theory that I have developed from them, in a peer-reviewed journal which focuses on teachers' professional development. By making my research applicable to various forms of collaboration, and not only to teaching school alliances, I might be able to increase its 'significance' to both academic and practitioner audiences. There may also be scope for offering analysis of my research design in the context of part-time doctoral research practices, probably in a peer-reviewed journal dealing with teaching and learning in higher education. By addressing doctoral students, and their teachers and supervisors, from a methodological perspective, I could potentially reach an audience that would not be interested in my research area of educational change in a collaborative setting. This approach has already borne fruit in a contribution that I made to a book on professional doctoral research practices, which I discuss in the following section.

6.2.3   <u>Publication in a co-authored book</u>

In Chapter One of this thesis, I discuss the ethical dilemmas that I faced as a researching professional investigating the organisation that I worked in. This aspect of my research also contributed to a chapter that I wrote in 2016 for a co-authored, edited book on theories and practices in professional doctoral study. The title of my chapter is "Three agendas for funded professional doctoral students: challenging and developing your thinking about your doctoral journey", which appears in the volume *Transformative doctoral research practices for professionals* (Burnard, Dragovic, Flutter & Alderton (Eds.) (2016), pp.43-60, Rotterdam: Sense Publishers). The book has been reprinted following interest in the higher education sector. I also uploaded the final author's version of the chapter to ResearchGate, where it has accumulated 59 reads as of May 2017; the available data on readers shows 'reach' around the world. I am still awaiting my first citation, but I hope that what I have to say about the particular dilemmas and difficulties of being a researching professional could be

significant to fellow doctoral students in a wide range of fields. The same aim prompted me to present this area of my work at a conference organised by the Faculty of Education, University of Cambridge ('Engaging and engagement with the professional doctorate', 17 June 2017).

6.2.4   Presentation of my findings to interested practitioners

In June 2017, as I completed my thesis, I made contact with leaders of a recently-designated teaching school alliance in another county in order to get feedback on my findings and the emergent theory that I developed from them. I wanted to test my data and interpretations against the experiences of practitioners in settings other than my own (as I discuss under 'Suggestions for further research' in section 5.6 of Chapter Five), and I also intended to offer potentially useful information and ideas that could help other teaching school alliances to make a success of their collaborative CPD work. The meeting would thus have a two-way, dynamic frame, whereby both parties could gain from the exchange.

Two of the alliance's leaders (one the overall alliance lead, the other co-ordinating CPD) gave me an hour of their time and listened attentively to my presentation. They said that the identification and allocation of time for development was a key issue in their alliance, both for alliance leaders in terms of planning, and for classroom staff in terms of attending alliance-generated CPD events. The unpopularity among staff of 'twilight' events was mentioned. They acknowledged my finding about the barrier effect of micro-politics, but felt that their alliance, which comprises a relatively small number of schools centred on one town and already used to working together, might not suffer as badly from it as other alliances. The CPD co-ordinator was prompted by my finding about staff agency to remark that he had not thought to ask whether member schools' ideas on what development priorities should be addressed had been generated by consulting classroom staff or solely by school leaders. He said that he would follow this up. In my estimation, this meeting generated some mutual benefit for both parties, although if I were to make a similar presentation again I would substantially reduce the section on research methodology (which was not relevant to this audience's instrumental goals), and I would produce a discrete checklist of recommended actions for alliance leaders as a practical summary of my findings.

I also presented my work to a small, voluntary audience of colleagues in my own school. By this means, I could get some feedback from classroom staff who work in a school that is a member of an alliance. Of course, I needed to deal with potential bias or distortion caused by us being members of the same professional community of practice, with the issues of covert assumptions, power and critical distance that this position implies (Griffiths, 1998; Appleby, 2013). I also needed to be conscious of my simultaneous *emic* and *etic* positioning

(Morris, Leung, Ames & Lickel, 1999) as both a member of the organisation and a doctoral researcher studying it.

The outcome was instructive, not least because the Headteacher and Deputy Head chose to attend. My colleagues largely agreed with my findings regarding probable facilitators and barriers to their professional development. They strongly agreed that informal, spontaneous contacts ('heterarchical undisciplined' innovation) were highly influential in their thinking about their own professional development: they valued unplanned conversations in the staff room, informal contact on a wider scale via social media platforms such as Twitter, and between-schools contact at activities such as a concert given jointly by musicians from the town's schools. They mostly agreed that in-school professional development time tends to be dominated by school leaders ('hierarchical' activity). The Deputy Head said that one reason for this was the necessity of passing key information to all staff at once, such as the nationally-determined training requirement on safeguarding that all those coming into contact with children must receive (DfE, 2016b; McNeill, Butt & Armstrong, 2016). However, this example would probably not be recognised as 'professional development' under most of the definitions that I discuss in Chapter Two; it is more likely to be seen as the appropriation of staff development time by school leaders to meet the performativity agenda (Kennedy, 2014b; Lofthouse & Thomas, 2017). One middle leader suggested that the professional learning most likely to be adopted and normalised into their practice by his departmental colleagues was generated by classroom staff, rather than by him. Even at the level of the subject team (which my research found to be fruitful for collaboration), a middle leader was still seen as a leader with power that could be wielded hierarchically. Another middle leader wondered whether a link between performance management arrangements and professional development activity would increase take-up. This question lies outside the scope of my research, but it was discussed further with the Head and Deputy Head as I report below.

Regarding other barriers to change, several people said that their own school was their primary focus ('introspection') and thus that a further, system-level layer of formalised collaboration was unwelcome. The Headteacher, who had been appointed at the start of the Alliance's third year, said that he saw the subject Alliance as "someone else's project" and therefore he did not give it much attention. This attitude seems to be echoed in other schools: the Deputy Head said that when he attended Alliance CPD co-ordinator meetings this year (Year Four), "only five or six people turned up", which he ascribed to dwindling interest in what the Alliance could offer member schools.

In a follow-on session with the Headteacher and Deputy Head once other colleagues had left, we discussed my findings on attitudes to professional development. Sparked in part by the point raised above about performance management arrangements being a possible driver of CPD activity, we discussed ways in which CPD could be managed more effectively

by school leaders. My findings on classroom staff agency and the problem of normalising change into practice were accepted as having weight by my school leaders. This discussion might lead to substantive changes in the way that my school approaches CPD, possibly including me being appointed to lead on it. If such changes come about, then I could claim practical impact for my research in my own workplace, which is indeed one of the aims of the EdD.

6.3   Locating my research in the policy and practice landscapes

The teaching school alliance model that has been the focus of this research is only one of several models of collaboration between schools. Initiated by the Coalition government's White Paper *The Importance of Teaching* (HM Government, 2010), teaching schools and the alliances that they are intended to lead are currently running alongside, and sometimes duplicating, other formal school partnerships including federations which share governance, chains of sponsored academies, and multi-academy trusts (MATs); and also informal, voluntary improvement partnerships or 'collectives', which may be long-standing or temporary and dependent on circumstances (Simkins, 2015). As the teaching schools programme has continued under the Conservative government which took office in 2015, further cohorts of teaching schools have been designated, sometimes in areas where an earlier-cohort alliance already exists. The paradoxical result of these structural reforms, it is suggested by Greany (2015b), has been increased fragmentation of the English education system at the same time as increased networking between schools. Greany suggests that schools are not yet working in the 'deep partnerships' envisaged by Hargreaves (2010). This observation is supported by evidence on school partnerships and co-operation taken by the House of Commons Education Committee (2013); in the evaluation of teaching school alliances for the National College by Gu et al. (2015); and to a certain extent by Armstrong (2015) whose review of school partnerships finds limited evidence for direct impact of collaboration on student outcomes, but more widespread indications of school improvement (for example, in staff professional development and career opportunities, the sharing of good practice and innovation, and organisational benefits to succession planning and financial efficiency).

A further complication to this picture is the rise of the multi-academy trust (MAT) as the policy-preferred form of between-schools collaboration (Simkins, Coldron, Crawford & Maxwell, 2018). The composition and leadership of a MAT is tighter than that of a teaching school alliance: 85% of MATs in July 2016 consisted of five schools or fewer (EFA, 2016), and a MAT is led by a single executive headteacher, principal or chief executive officer, rather than by a steering group. MATs can thus offer 'deep partnership' with 'hard

governance' and 'executive leadership arrangements' of the sort that is claimed to produce significant impact (Greany & Allen, 2014). The Department for Education's 2016 White Paper, *Educational Excellence Everywhere* (DfE, 2016a, p.72), positions MATs as the dominant model for facilitating school improvement: "most schools will join or establish a MAT and in many cases, they will draw school improvement support from the MAT." In the full White Paper, MATs are mentioned 96 times, teaching schools 53 times, but teaching school alliances 13 times and only in tandem with MATs. Teaching schools themselves are presented as having a role "as a source of support on which autonomous schools can choose to draw" (*ibid*, p.42), for example acting as 'brokering hubs' for high-quality school-to-school support and evidence-led professional development. But the teaching school is only one of the sources cited, and the teaching school *alliance* is not mentioned in this regard. The 2016 White Paper asserts that "we do not want to create monopolies" (*ibid*, p.73). However, it seems clear that the plans outlined in *The Importance of Teaching* (HM Government, 2010) to establish voluntary, school-led teaching school alliances as a central element of a 'self-improving school system' have been superseded by the formation of 'private monopolies' which could be seen to undermine school autonomy by reproducing the sort of legal-bureaucratic arrangements practised by local government (Wilkins, 2017).

The future for existing teaching school alliances thus seems uncertain. It is possible that an alliance could be eclipsed by local MATs so that the alliance simply melts away as schools decide not to participate; or that some elements of an alliance's membership and activity could be subsumed if the designated teaching school leads or belongs to a MAT. In a pragmatic response to competition for participants, an alliance might restructure itself, or change the offer it makes in order to retarget its appeal.

In the local area covered by my research, in mid-2017 my subject Alliance faced competition from a second teaching school alliance and from two newly-formed MATs, all of which include as members some schools which joined the original Alliance in 2013. Interview evidence suggests that attention among both school leaders and classroom staff has shifted away from the original Alliance and towards these more recent arrivals. Early in Year Four of its operations, my subject Alliance staged a high-profile conference on women in educational leadership, delivered by a national-level provider. This echoes the approach taken by the newer, Cohort 4 teaching school alliance, and might be seen as an attempt by the Alliance to rebrand and retarget its work in response to the impact that its rival has made. But one of my key findings is that classroom staff are more likely to take up an opportunity that is not available elsewhere, so mere replication of another provider's offer will not necessarily increase participation rates.

In the light of recent national policy changes, it appears that the teaching schools experiment has stalled and has been overtaken by a newer, tighter and leaner model, the multi-academy

trust. The alliance model depends on the voluntary association of autonomous schools driven by a moral imperative to improve every pupil's outcomes. But it turns out to be too much to expect schools and staff to commit themselves to a further layer of collaborative work on top of their already full agenda of within-school priorities, particularly if no immediate benefit or relevance is perceived. It remains to be seen whether the new MATs in my local area can do a better job in this regard than its first teaching school alliance.

6.4   Reflections on the research process

In Chapter Three of this thesis, I discuss the challenging nature of undertaking a longitudinal research project within the constraints of part-time study, while working full time as a middle leader in a secondary school. During my EdD course, I identified the following obstacles to completing my research:

- the limited time available to become familiar with the literature, to conduct three iterations of my multi-strand, sequential research design, and to analyse data and write up findings;
- difficulty in recruiting sufficient participants, and in getting a sufficiently high response rate, for a valid sample over three years;
- sustaining support for and interest in my research among the Alliance's leaders, who had agreed to fund it;
- dealing with changes in circumstances at the policy level, the organisational level, and the individual level both for my participants and for myself.

Time management became a critical concern in the first year of my research, particularly given the self-imposed requirement to undertake the doctoral registration process relatively early. I wanted to get it out of the way in order to complete sufficient iterations of my research design within the EdD life span of five years. Year One was, probably inevitably, the most difficult in this regard, but once I decided that I would consistently devote portions of each weekend and each school holiday to 'Cambridge work', I found that I could compartmentalise tasks and execute them adequately (if not perfectly) in the time that I made available. I had to accept that I could not do everything that a full-time doctoral researcher might do, but I hope that I have done enough.

Sample composition and response rate were a continuing concern for me over the course of my research. As I discuss in section 5.5 of Chapter Five, my decision to make participation in the QUAN phase completely anonymous meant that I could not recruit questionnaire respondents by direct approach. Instead, I relied on 'gatekeepers' in each

sample school to promote the questionnaire and encourage completion by their classroom staff, although I could not count on either of these steps taking place. My questionnaire was thus vulnerable to being ignored, or to being accepted but not returned, or to being returned only partially completed: each of these problems occurred in all three iterations. If a participant did accept and return a completed questionnaire, there remained the possibility of discontinuance of participation in subsequent iterations. The fluctuations in sample composition and response rate between iterations that I detail in Chapter Four were probably an unavoidable consequence of my research design, and they limited the deductions that I could make when comparing iterations. If I were to redesign the study, I would attempt to maintain sample composition by recording each Year One participant's identity and making a direct approach for subsequent iterations. This would not have met with 100% success because a three-year commitment would seem daunting to some, but the iterations' samples would have been more similar to each other. However, admitting new participants to the research in Year Two (when about two thirds said that they had not previously answered) and in Year Three (when about one third said that they had not previously answered) probably ensured a wider spread of responses, and allowed for changing circumstances to be reflected in the samples that I did gather.

In the QUAL phases, I also relied on participants volunteering to give me an interview. There was a high attrition rate from writing one's email address onto the questionnaire form to accepting my request for an interview to actually conducting the interview: across the three iterations, only 33% of people who gave me their address eventually gave me an interview. However, as with the QUAN phases, the mix of 'regulars' who spoke to me in all three iterations, and people whom I saw only once, meant that I could access the views of a broader range of participants than would have been possible with a fully consistent interview sample. In both the QUAN and the QUAL phases, the fact that I could not pre-determine the sample composition probably gave greater richness, and possibly greater ecological validity, to my data.

Support for and interest in my research among Alliance leaders was certainly beyond my control. While I was very grateful for the support of my own headteacher in his capacity as the first Alliance leader, I could not guarantee that his interest would last for the duration of the EdD course – five years is a long time in the life of a school leader. As it turned out, his decision to retire at the end of Year Two of my study meant that all bets were off. Because leadership of a teaching school alliance is vested in a specific individual, who must hold a current 'Good' or 'Outstanding' grading for school leadership and have been in place for at least three years, the new headteacher of my own school could not be appointed to lead the Alliance. There was only one other candidate to take over formal leadership of the Alliance and, having reviewed the budget, that person decided to remove funding for my EdD course.

This seemed to signal a decline in interest in my work, and my Year Three report to Alliance leaders met with a muted response. While this turn of events has not prevented me from completing the course, the impact that my research could generate was definitely reduced by this markedly different attitude to it. This is one of the changes in circumstances that I faced, although not one that I had predicted.

Changes in circumstances at the levels of policy, of the organisation, and of the individual had the potential to affect the conduct, outcomes or impact of my research. The apparent change at policy level to favour the multi-academy trust (MAT) model of between-schools collaboration (DfE, 2016a) has already been discussed in section 6.3 above. While it did not derail the conduct of my research as such, this decision means that less attention is being paid to the teaching school alliance model now than was previously the case, and thus that the impact of my research is reduced. At organisational level, my subject Alliance underwent a change in leadership as discussed in this section, and now also faces micro-political tensions caused by competition from a second teaching school alliance and two newly-formed MATs in the local area, as I also discuss in section 6.3. It appears that Alliance priorities and the plans for achieving them have altered over time. The findings and recommendations produced by my research might therefore become redundant as the direction of travel of my subject Alliance changes. Individuals' changes in circumstances probably contributed to discontinuance of participation in the QUAN phases, and some interviewees said that they could not give me an interview in later iterations due to changes in their role, workload or place of employment. None of these changes materially damaged my research, but they did influence its conduct, outcomes or impact to some degree. Since I could not control any of the causes, I had to accept that such changes were inevitable over the course of a longitudinal study, and to account for them in my data analysis and interpretation of findings.

6.5   Personal reflections on undertaking a part-time Doctorate in Education

At my school's routine staff training meeting in September 2011, which was also the mid-point of my Cambridge MEd course on educational leadership and school improvement (ELSI), I delivered a 10-minute presentation to my colleagues about peer-to-peer networking, teacher collaboration, and the efficacy of self-determined professional development. At that stage, my focus was on within-school activity: I hoped to inspire my colleagues with the enthusiasm for self-improvement and professional agency that various presentations and discussions during the first year of the MEd course had inspired in me. There was an initial ripple of interest and a small number of teachers expressed willingness to form collaborative improvement triads. But perhaps predictably, this interest vanished during the course of the

term as the day-to-day pressures of school life assumed their habitual dominance. The experience was chastening and rather dispiriting, and caused me to doubt whether the fruits of educational research could ever be utilised effectively and sustainably by very busy classroom staff.

However, I did thoroughly enjoy my own Masters-level study of educational improvement and, after a year's break, returned to Cambridge for my EdD, chosen over the part-time PhD because this novel form of doctorate is tailored for practitioners who want to link their research closely to their working environments. I had not given up on the notion that educational research could prove useful and utilisable to teachers, so I sought a topic that would have direct impact on the work of my school and my colleagues. Timed perfectly to coincide with my search, my school was designated a Teaching School; my headteacher was appointed a National Leader of Education with a remit to support the development of other schools; and my subject Alliance consisting of some 26 schools and colleges was born in April 2013. My existing interest in collaborative self-improvement could now be extended to system or between-schools level.

In putting together a research proposal, it quickly became clear that I would not have the time or resources to investigate every strand of teaching school activity; in any case, the Alliance leaders did not intend to launch all six in the first year. The CPD strand seemed to be the obvious choice for my project: as a middle leader for a total of 20 years in three schools, a major focus of my leadership work has been the continuing professional development of my departmental colleagues; and impatience with my own experience of top-down, imposed 'training' had led me to present ideas about collaborative self-improvement in my current school. The CPD strand also seemed to me to be important because of the prevailing view in the literature that improving the effectiveness of teaching is central to educational improvement as a whole. To my mind, there could not be a more significant area for me to research.

I learned the painful way in my first EdD year that time is the most precious resource imaginable to a part-time researcher who is also a full-time practitioner. Having stood on the precipice of abandoning the course that first summer because I could not see a way to get the work done, I resolved to be ruthlessly selfish in allocating time to my doctorate. I gave up leading extra-curricular activities at school; negotiated a modest timetable allowance for research; and secured my wife's consent to spending portions of each weekend and school holiday on 'Cambridge work.' The way ahead cleared and I could see a route towards completion. I adopted a rigorously methodical and self-disciplined approach to my research which I found that I could transfer to my day job: there is a finite amount of time to spend on any task, so I work intensively to complete the task as far as I reasonably can in that time,

and then I stop working on it. This development in my professional practice is one of the major benefits to come from undertaking part-time doctoral research.

The second major benefit to me has been a deeper and broader understanding of how to learn with peers – the development of a 'collegiality' that is not contrived but authentic, mutual and supportive (Harris & Anthony, 2001; Hargreaves & Dawe, 1990). The presentations and discussions in cohort groups and in research communities that form a key element of the EdD course (and which distinguish it from conventional PhD courses) have revealed to me the value of focused and disciplined 'critical friendship' (Swaffield, 2004, 2007; Baskerville & Goldblatt, 2009) as a fundamental professional learning activity. I certainly could not have produced work of the level that I have without the careful and insightful critiques of my fellow EdD students, of the expert lecturers who have contributed to the course, and of my very patient supervisor: I am hugely grateful to all of them. I have tried to transfer this mode of collaborative working to my professional situation, although the hierarchical structure of a school makes fully authentic critical friendship problematic in practice. The power that a middle leader holds is likely to colour the thinking and attitudes of the colleagues whom he leads, as has been seen in the similar techniques of 'coaching' and 'mentoring' (Lancer, Megginson & Clutterbuck, 2016). It may be that a more fruitful deployment of critical friendship for me would be heterarchically with fellow middle leaders, where issues of power are less relevant.

Principally, and as a consequence of the things that I have mentioned above, I feel that I have developed my knowledge and skills as an independent, reflexive and critical researcher of education. The fact that I am also a full-time professional working in a school has added a powerful dimension of practice to my research stance, but I now see my own school (and the other schools that I come into contact with) in a much more complex light. I have become a *researching professional* in everything I do, not only in pursuit of my doctorate. That broadening and deepening of my approach to the world of education in particular, and to the world in general, has been profoundly significant. Such a change in myself was unexpected when I commenced the course, but I think that it is profoundly to be welcomed.

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Appendices

Appendix 1:   Participants' versions of questionnaires

Appendix 2:   Consent form for interviews

Appendix 3:   Example of executive summary from annual report
to Alliance leaders

Appendix 1

Participants' versions of questionnaires

Year One questionnaire

Year Two questionnaire

Year Three questionnaire

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SECTION A   BACKGROUND INFORMATION

For Questions 1 to 5, please either tick the small box which most closely reflects your situation or write a number in the large box provided:

Q1   Are you **male or female**?   Male ☐   Female ☐

Q2   **How long** have you worked in education?   ☐ years

Q3   What is the highest level **qualification** you hold?
          certificate or diploma ☐   bachelors degree ☐   masters degree ☐   doctorate ☐   other ☐

Q4   **EITHER** (a) If you are a qualified teacher, what **route** did you take to QTS?
          BEd ☐   CertEd ☐   PGCE ☐   SCITT ☐   GTTR ☐   School Direct ☐   Teach First ☐   other ☐

          OR   (b) If you don't have QTS, what **route** did you take into education work?
          Instructor ☐   TA/HLTA ☐   professional training in another field ☐   other ☐

Q5   How many **pupils** are there in your school?   ☐ pupils

SECTION B   PERCEPTIONS AND ATTITUDES

For the following questions, please circle the number on the scale (where 1 is lowest and 5 is highest) which most closely reflects your response:

		Not at all	Not much	Neutral	Quite a lot	Very much
Q6	How much does your school encourage and support teacher development?	1	2	3	4	5
Q7	How effective do you think teacher development is in your school?	1	2	3	4	5
Q8	How much does your school encourage and support collaboration between teachers?	1	2	3	4	5
Q9	How effective do you think collaboration between teachers is in your school?	1	2	3	4	5
Q10	How important do you think it is that teachers improve their skills and knowledge?	1	2	3	4	5
Q11	How important do you think it is to take part in continuing professional development (CPD)?	1	2	3	4	5
Q12	How often have you taken part in CPD in the past 12 months?	1	2	3	4	5
Q13	How important do you think it is that teachers determine their own professional development?	1	2	3	4	5
Q14	How often have you initiated professional development for yourself in the past 12 months?	1	2	3	4	5
Q15	How often do you reflect on your own teaching with the aim of making changes?	1	2	3	4	5

Q16   Is your school part of a teaching school alliance?   *Please tick one answer:*   Yes ☐   No ☐   Don't know ☐

		Not at all	Not much	Neutral	Quite a lot	Very much
Q17	How far do you understand the aims and functions of a teaching school alliance?	1	2	3	4	5
Q18	How far do you support the aims and functions of an alliance?	1	2	3	4	5
Q19	How far do you have an idea of the benefits to your school of membership of an alliance?	1	2	3	4	5

		Not at all	Not much	Neutral	Quite a lot	Very much
Q20	How far do you have an idea of the benefits to **your pupils** of membership of an alliance?	1	2	3	4	5
Q21	How far do you have an idea of the benefits to **you professionally** of membership of an alliance?	1	2	3	4	5
Q22	How much do you think you would **get involved personally** in activities generated by an alliance?	1	2	3	4	5

The six strands of an alliance's work are: coordinating and delivering continuing professional development (CPD); initial teacher training (ITT); leadership development and succession planning (LSP); research and development (R&D); school-to-school support (S2S); and developing and deploying specialist leaders of education (SLEs).

Q23	How important do you think **CPD** is in an alliance's work?	1	2	3	4	5
Q24	How important do you think **ITT** is in an alliance's work?	1	2	3	4	5
Q25	How important do you think **LSP** is in an alliance's work?	1	2	3	4	5
Q26	How important do you think **R&D** is in an alliance's work?	1	2	3	4	5
Q27	How important do you think **S2S** is in an alliance's work?	1	2	3	4	5
Q28	How important do you think **SLEs** is in an alliance's work?	1	2	3	4	5

Q29 Have you discussed teaching school alliances with any colleagues in your own school?   Yes ☐   No ☐

Q30 Are you in contact with anyone in another school which belongs to an alliance?   Yes ☐   No ☐

Please add any comments you wish to make about **any aspect** of this project:

Thank you very much for participating in this survey – the time you have given is greatly appreciated!

If you are willing to be contacted about your answers to this questionnaire and/or about other issues connected with this research project, please provide an email address at which the project leader can reach you:

My email address is:

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SECTION A   BACKGROUND INFORMATION

For Questions 1 to 5, please either tick the small box which most closely reflects your situation or write a number in the large box provided:

Q1   Are you **male or female?**   Male ☐   Female ☐

Q2   **How long** have you worked in education?   ☐ years

Q3   What is the highest level **qualification** you hold?
            NVQ ☐   certificate or diploma ☐   bachelors degree ☐   masters degree ☐   doctorate ☐   other ☐

Q4   EITHER (a) If you are a qualified teacher, what **route** did you take to QTS?
            BEd/BA+QTS ☐   CertEd ☐   PGCE ☐   SCITT ☐   GTP ☐   School Direct ☐   Teach First ☐   other ☐

         OR   (b) If you don't have QTS, what **route** did you take into education work?
            Instructor ☐   LSA / TA / HLTA ☐   professional training in another field ☐   other ☐

Q5   Did you answer the **first edition** of this survey in January 2014?   Yes ☐   No ☐

Please turn over >

SECTION B   PERCEPTIONS AND ATTITUDES

For the following questions, please circle the number on the scale (where 1 is lowest and 5 is highest) which most closely reflects your response:

		Not at all	Not much	Some/ fairly	Quite a lot	Very much
Q6	How much does your school encourage and support teacher development?	1	2	3	4	5
Q7	How effective do you think teacher development is in your school?	1	2	3	4	5
Q8	How much does your school encourage and support collaboration between teachers?	1	2	3	4	5
Q9	How effective do you think collaboration between teachers is in your school?	1	2	3	4	5
Q10	How important do you think it is that teachers develop their skills and knowledge?	1	2	3	4	5
Q11	How important do you think it is to take part in school-directed development activity?	1	2	3	4	5
Q12	How often have you taken part in school-directed activity in the past 12 months?	1	2	3	4	5
Q13	How important do you think it is to take part in development activity that you choose yourself?	1	2	3	4	5
Q14	How often have you taken part in planned activity that you chose yourself in the past 12 months?	1	2	3	4	5
Q15	How often have you joined in with unplanned development activity in the past 12 months?	1	2	3	4	5

'Teaching schools' are intended to drive improvement across the education system by forming partnerships or 'alliances' with other schools and providers to share learning, excellent practice and innovative ideas, mainly in the areas of teacher education and development.

Q16	How far do you **understand** the aims and functions of a teaching school alliance?	1	2	3	4	5
Q17	How far do you **support** the aims and functions of an alliance?	1	2	3	4	5
Q18	How far do you have an idea of the benefits to **your school** of membership of an alliance?	1	2	3	4	5

Questions continue on next sheet >

		Not at all	Not much	Some/ fairly	Quite a lot	Very much
Q19	How far do you have an idea of the benefits to **your pupils** of membership of an alliance?	1	2	3	4	5
Q20	How far do you have an idea of the benefits to **you professionally** of membership of an alliance?	1	2	3	4	5
Q21	How much do you think you would **get involved personally** in activities generated by an alliance?	1	2	3	4	5

The six strands of an alliance's work are: coordinating and delivering continuing professional development (CPD); initial teacher training (ITT); leadership development and succession planning (LSP); research and development (R&D); school-to-school support (S2S); and developing and deploying specialist leaders of education (SLEs).

Q22	How important do you think **CPD** is in an alliance's work?	1	2	3	4	5
Q23	How important do you think **ITT** is in an alliance's work?	1	2	3	4	5
Q24	How important do you think **LSP** is in an alliance's work?	1	2	3	4	5
Q25	How important do you think **R&D** is in an alliance's work?	1	2	3	4	5
Q26	How important do you think **S2S** is in an alliance's work?	1	2	3	4	5
Q27	How important do you think **SLEs** is in an alliance's work?	1	2	3	4	5
Q28	How often have you discussed professional development with anyone in **your own** school in the past 12 months?	1	2	3	4	5
Q29	How often have you discussed professional development with anyone from **another** school in the past 12 months?	1	2	3	4	5

Q30 Please rank the following ways of **schools working together** in order of importance to you (write '1' against the most important, etc.):

Academy chain or trust ☐

Federation ☐

Multi-school improvement partnership ☐

Two-school improvement partnership ☐

Teaching school alliance ☐

Q31 Is your school a member of a teaching school alliance? Yes ☐ No ☐ Don't know ☐

Please add any comments you wish to make about **any aspect** of this project:

Thank you very much for participating in this survey – the time you have given is greatly appreciated!

If you are willing to be contacted about your answers to this questionnaire and/or about other issues connected with this research project, please provide an email address at which the project leader can reach you:

My email address is:

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SECTION A   BACKGROUND INFORMATION

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Q4   **EITHER** (a) If you are a qualified teacher, what **route** did you take to Qualified Teacher Status (QTS)?
        BEd/BA+QTS ☐   CertEd ☐   PGCE ☐   SCITT ☐   GTP ☐   School Direct ☐   Teach First ☐   other ☐

        OR   (b) If you don't have QTS, what **route** did you take into education work?
        Instructor ☐   LSA / TA / HLTA ☐   professional training in another field ☐   other ☐

Q5   Did you answer **either the first or second editions** of this survey?   Yes ☐   No ☐

Please turn over >

SECTION B   PERCEPTIONS AND ATTITUDES

For the following questions, please circle the number on the scale (where 1 is lowest and 5 is highest) which most closely reflects your response:

		Not at all	Not much	Some/ fairly	Quite a lot	Very much
Q6	How much does your school encourage and support teacher development?	1	2	3	4	5
Q7	How effective do you think teacher development is in your school?	1	2	3	4	5
Q8	How much does your school encourage and support collaboration between teachers?	1	2	3	4	5
Q9	How effective do you think collaboration between teachers is in your school?	1	2	3	4	5
Q10	How important do you think it is that teachers develop their skills and knowledge?	1	2	3	4	5
Q11	How important do you think it is to take part in school-directed development activity?	1	2	3	4	5
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Q13	How important do you think it is to take part in development activity that you choose yourself?	1	2	3	4	5
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Q15	How often have you joined in with unplanned development activity in the past 12 months?	1	2	3	4	5

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Q16	How far do you understand the aims and functions of a teaching school alliance?	1	2	3	4	5
Q17	How far do you support the aims and functions of an alliance?	1	2	3	4	5
Q18	How far do you have an idea of the benefits to your school of membership of an alliance?	1	2	3	4	5

Questions continue on next sheet >

		Not at all	Not much	Some/ fairly	Quite a lot	Very much
Q19	How far do you have an idea of the benefits to **your pupils** of membership of an alliance?	1	2	3	4	5
Q20	How far do you have an idea of the benefits to **you professionally** of membership of an alliance?	1	2	3	4	5
Q21	How much do you think you would **get involved personally** in activities generated by an alliance?	1	2	3	4	5

The six strands of an alliance's work are: coordinating and delivering continuing professional development (CPD); initial teacher training (ITT); leadership development and succession planning (LSP); research and development (R&D); school-to-school support (S2S); and developing and deploying specialist leaders of education (SLEs).

		Not at all	Not much	Some/ fairly	Quite a lot	Very much
Q22	How important do you think **CPD** is in an alliance's work?	1	2	3	4	5
Q23	How important do you think **ITT** is in an alliance's work?	1	2	3	4	5
Q24	How important do you think **LSP** is in an alliance's work?	1	2	3	4	5
Q25	How important do you think **R&D** is in an alliance's work?	1	2	3	4	5
Q26	How important do you think **S2S** is in an alliance's work?	1	2	3	4	5
Q27	How important do you think **SLEs** is in an alliance's work?	1	2	3	4	5
Q28	How often have you discussed professional development with anyone in **your own** school in the past 12 months?	1	2	3	4	5
Q29	How often have you discussed professional development with anyone from **another** school in the past 12 months?	1	2	3	4	5

Q30   Please <u>rank</u> the following ways of **schools working together** in order of importance to you (write '1' against the most important, etc.):

► Academy chain   *(a number of academies run by a single trust or private provider)*   ◯

► Federation   *(two or more schools sharing the same governing body)*   ◯

► Multi-school improvement partnership   *(several schools voluntarily collaborating but with own governing bodies)*   ◯

► Two-school improvement partnership   *(two schools voluntarily collaborating but with own governing bodies)*   ◯

► Teaching school alliance   *(a grouping led by a designated 'teaching school')*   ◯

Q31   Is your school a member of a teaching school alliance?   Yes ☐   No ☐   Don't know ☐

Please add any comments you wish to make about **any aspect** of this project:

Thank you very much for participating in this survey – the time you have given is greatly appreciated!

If you are willing to be contacted about your answers to these questions and/or about other issues connected with this research project, please provide an email address at which the project leader can reach you:

My email address is:

Appendix 2

Consent form for interviewees

Educational research project consent form

Name of researcher, faculty, telephone number and e-mail:

Simon Dowling, Faculty of Education, University of Cambridge; tel. 01449 741731 (home); sd551@cam.ac.uk

Supervisor:

Dr Panayiotis Antoniou, Faculty of Education, University of Cambridge; pa241@cam.ac.uk

Title of project:

EdD Thesis: "The influence of a Teaching School Alliance on classroom staff's professional development"

_____

This consent form, which complies with the requirements of the British Educational Research Association's 'Ethical guidelines for educational research' (BERA, 2011), is only part of the process of informed consent. If you would like more details about anything mentioned here, or any information not included here, please feel free to ask. Please take the time to read this form and any accompanying information carefully.

Purpose of the study:

This project is being conducted in fulfilment of the requirements of the University of Cambridge's EdD degree course. Its aim is to investigate the spread of innovations amongst classroom staff in schools belonging to a Teaching School Alliance. It asks whether attitudes to change and the perceptions of the alliance and its work that are held by 'front-line' teaching staff have an effect on the take-up of alliance-generated professional development and school improvement opportunities.

What will I be asked to do?

The first phase of the project invites all classroom staff in a representative selection of the schools in the Alliance ('the sample') to complete a questionnaire which asks about their attitude to change, particularly regarding professional development, and their perceptions of the alliance and its work. Returning a completed questionnaire is deemed to indicate consent to participation in this element of the survey. After responses to the questionnaire have been analysed, respondents who indicate a willingness to do so will be invited to take part in a brief interview so that you can respond to the survey's results.

Your participation is entirely voluntary: you may decline to participate in any part of the project or to participate at all; you may withdraw from the project at any time for any reason or for no reason.

What type of personal information will be collected?

No personal identifying information will be collected in this study and all participants will remain anonymous. Interviews will be digitally recorded for later analysis unless you indicate that you do not wish this to happen.

Are there risks or benefits if I participate?

There are no reasonably foreseeable risks or harms associated with this study. If you disclose sensitive information or give a personal opinion which contradicts 'official' policy, particularly where this might affect your work in the school where you are employed, the researcher will ask you whether you wish to authorise or to forbid the use of these data in any written or verbal outcome. This provision does *not* override any legal obligation on the researcher to disclose key information such as pertaining to an issue of safeguarding to an appropriate authority. You will not receive any payment for taking part in this project.

What happens to the information I provide?

Participation is completely voluntary, anonymous and confidential. All data will be collected under a pseudonym which you have chosen. You are free to withdraw from the study at any time, in which case your responses will be deleted and not used in the project. You will have access to the data collected at interview and to the analysis of the data in the form of a copy of the completed thesis. No-one except the researcher and his supervisor will have access to the raw data or the interview transcripts. These data will be stored securely for five years from their collection date, after which period they will be permanently destroyed.

Signatures (written consent)

Your signature on this form indicates that you (1) understand to your satisfaction the information provided to you about your participation in this research project, and (2) agree to participate as a research subject.

This consent does not affect your legal rights nor release the researcher or involved institution from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You are free to ask for clarification or new information at any time during your participation.

Participant's name: (please print) …………………………………………………………

Participant's signature: …………………………………………………………………..

Researcher's name: (please print) …………………………………………………………..

Researcher's signature: ………………………………………………………………….

Questions and concerns:

If you have any further questions or want clarification regarding this research project, please contact: Simon Dowling, Faculty of Education, University of Cambridge; tel. 01449 741731 (home); email sd551@cam.ac.uk.

A copy of this consent form has been given to you to keep for your records. The researcher has kept a copy of this consent form.

Appendix 3

Example of executive summary from annual report to Alliance leaders

Year Two Report to Alliance Leaders - extract

1.   Executive summary

a.   <u>Recommendations for Alliance leaders</u>

(1)   Alliance-generated CPD events should focus on **providing what classroom staff cannot find elsewhere**. Successful examples seen in Year Two include leadership preparation courses; opportunities for potentially isolated teachers of 'small' subjects to meet; and booking an external expert to work with staff from a number of schools.

(2)   **Departmental 'liaison and sharing' meetings** with no specific purpose or concrete gain are unpopular and should be abandoned.

(3)   The Alliance should exploit its size and weight to organise a **whole-day, alliance-wide CPD conference** along the lines of ResearchED and Northern Rocks. The event would take place on a commonly-agreed non-pupil day and be hosted at a suitable venue (a university?) or by one or two schools. Headline speakers would be invited in, but the majority of presentations would be by Alliance teachers talking about their own professional learning in TeachMeet style. This model has proved to be a powerful source of focused, effective CPD around the country and across the globe.

b.   <u>Summary of the research project</u>

Teaching Schools are a new feature in the complex educational landscape in England – but as observers have asked, what are they for?

There has been, to date, a distinct lack of critical, empirical research into Teaching Schools. My doctoral work aims to help fill that gap by undertaking a longitudinal, mixed-methods case study of the professional development (CPD) strand in a large Alliance from its first year of operations (the academic year 2013-14) through its second and third years and beyond. I ask whether it can reach the classroom staff who, policy-makers, school leaders and scholars agree, are the people who really matter in improving outcomes for pupils.

In this paper I present findings from the second iteration of the survey. I report on staff attitudes to change and development, and on their perceptions of the Alliance and its work in its second year. These data are supported by analysis of the Alliance's provision of CPD opportunities. I argue that, while a significant majority of respondents support change in principle, there is a fundamental gap between aspiration and practice in the CPD domain, particularly in the matter of teacher-led development. Early indications are that a Teaching

School Alliance may struggle to fill that gap for the majority of its staff, due partly to lack of knowledge or understanding of the Alliance's work, and partly to continued reliance on practices founded on within-school opportunities or on between-schools partnership work which predate the Alliance.

The impact of my study lies both in its utility to the Alliance's leaders and in the voice that it gives to staff concerns. My research indicates that a new multi-school grouping must work hard to mobilise collaborative CPD activity that goes beyond existing provision if it is to offer anything attractive to the majority of classroom staff. If it does not, then the spread of the innovation will be confined to the relatively few 'early adopters' who see something distinctive in what the Alliance can offer. The policy aspiration for a 'self-improving school system' (SISS) will thus not be met in practice.

c.   Main interim findings of the research project

(1)   A **gap between aspiration and practical reality in terms of professional development** has been confirmed by the second iteration of the survey. Staff working in classrooms mostly feel that their schools support change and they see their own development as important, but they are not as active in pursuing their own development as their perceptions of it would suggest. **Agency** (making one's own choices) continues to be a problematic concept in this regard. **Collaboration** (joint enterprise towards a shared goal) between classroom staff is also an area where aspiration and practice diverge for some respondents. CPD activity is often determined by school leaders in response to the school development plan, rather than by individuals. See Sections 3 and 4 of this paper for further details.

(2)   Respondents are largely supportive of the **teaching school alliance** model in principle, but are not convinced that this Alliance will help them practically in their own development. Perceptions of the aims and benefits of the Alliance's work are reported as neutral, due mainly to **lack of knowledge** about it. Other between-schools partnerships which pre-date the Alliance are thought to be more important. See Section 5 for further details.

(3)   Perceptions of the **six formal strands** of Alliance activity are reported as **relatively supportive** although, given the caution expressed in (2) above, this may be in the abstract rather than in practical terms. Indeed, direct knowledge of Alliance-generated activities is reported as limited. There has been an increase in Alliance-generated CPD activity in Year Two, but attendance rates vary significantly from event to event: those seen to offer **opportunities not available elsewhere** were well attended, while those which seemed to

duplicate other provision or to lack relevance were poorly attended and sometimes cancelled. There is scope for the Alliance deploying its collective strength to deliver high-impact, synergistic CPD in the form of a whole-day conference for all its staff. See Sections 6 and 7 for further details.