PROJECT QUALIFICATION SUPERVISION AND TEACHER DEVELOPMENT: A GROUNDED THEORY

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Abstract

Theoretical context: The effectiveness of teacher development is not substantiated by the best empirical evidence. New ways of thinking about teacher development are needed. Eraut's (2007) concept *learning as a by-product of working with clients* provides one such way.

Purpose: To establish whether and how teachers develop through project qualification supervision, a distinctive mode of teacher work with pupils.

Method: A grounded theory study involving semi-structured interviews with seven experienced project qualification supervisors.

Findings: Project qualification supervision is educative conversation to support independent pupil engagement. It demands teacher intellectual virtue. Teachers develop as a by-product, but the development is of limited significance.

Implications: Eraut's (2007) workplace learning theory and theory relating to project qualifications (Stoten, 2013; Yeoman et al., 2017) are refined.

Conclusion: Teacher development needs to be reconceptualised through the lens of critical pedagogy.

What if a regressive trait lurked in ‘the good man’?

Friedrich Nietzsche

He gives power to the weak,

And to those who have no might He increases strength.

Isaiah 40:29

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List of Abbreviations

AST	Advanced Skills Teacher
BERA	British Educational Research Association
CPD	Continuing professional development
CPDL	Continuing teacher professional development and learning
DfE	Department for Education
DfEE	Department for Education and Employment
EPQ	Extended Project Qualification
FPQ	Foundation Project Qualification
HPQ	Higher Project Qualification
INSET	In-service education and training
ITET	Initial teacher education and training
ITT	Initial teacher training
NCATE	National Council for Accreditation of Teacher Education
OECD	Organisation for Economic Co-operation and Development
Ofsted	Office for Standards in Education, Children's Services, and Skills
PLD	Professional learning and development
PISA	Programme for International Student Assessment

RSA	Royal Society for the Encouragement of Arts, Manufactures, and Commerce
TLR	Teaching and learning responsibility
UCL	University College London

Chapter 1: Introduction

1.1. Theoretical and political context

The proposition that the continuing professional training, learning, development, and education of teachers is important is widely accepted by educational theorists. To some academics, it is 'obvious' that teacher development is 'fundamental' to good teaching (Stoll et al., 2012, p. 2). Other writers, such as Earley and Bubb, make a series of more heroic assertions. For example, they assert that people development, including teacher development, is more effective in improving school performance than any other factor (Bubb & Earley, 2013, p. 237). Teacher development is 'crucial' for school improvement (ibid., p. 237) and 'a key component of developing children's learning' (Bubb & Earley, 2007, p. 13). It can, they claim, lead to better teaching and learning as well as enhanced pupil and staff well-being (Bubb & Earley, 2013, p. 237). A striking suggestion is that teacher holiday time should be shortened to create more time for it:

> It is salutary to…ask if some of this 'holiday' time might be devoted to professional development. Shorter holidays, especially over the summer, could have considerable benefits for teachers' and other staffs' [sic] learning and development. (ibid.)

Organisations with a fine pedigree also endorse the proposition that teacher development is important. The European Commission (2012), for instance, assert that teacher development is 'highly relevant…for improving educational performance'. According to the British Educational Research Association, alongside the Royal Society for the Encouragement of Arts, Manufactures, and

Commerce, the evidence that teacher development can improve teaching is ‘clear’ (BERA & RSA, 2014, p. 12). The Organisation for Economic Co-operation and Development holds that ‘empirical evidence increasingly shows the positive impact on students’ scores’ (OECD, 2014, p. 97); similarly, the Sutton Trust (2015, p. 10) advance the conspicuously Panglossian contention that ‘all the current evidence shows’ that teacher development is linked with high student achievement.

Importance is also conferred on teacher development by the school inspectorate of England, the Office for Standards in Education, Children's Services, and Skills (Ofsted). Ofsted has published two reports in which it repeatedly affirms the importance of professional development. In the first, it states that teacher development has the ‘potential’ to raise standards (Ofsted, 2006, p. 2), and it lauds schools that put it at the ‘heart’ (p. i) of their improvement plans. In the second, it found that teacher development makes a ‘crucial contribution’ to standards (Ofsted, 2010). More recently, Ofsted’s national director of education rehearsed this claim (Harford, 2016), and it is therefore unsurprising that teacher development is a criterion of inspection judgements about school quality (Ofsted, 2017) *[legacy inspection framework]*.

The government also values teacher development. It maintains that ‘professional development must be prioritised by school leadership’ (DfE, 2016a, p.11) because it can improve student outcomes (DfE, 2017a, p. 4). The former Secretary of State for Education, Nicky Morgan, and former Minister of State for Schools, David Laws, opined that ‘teaching should be a learning profession’ and that the continuing professional development of teachers needs to be ‘championed’ (DfE, 2014, p. 4). Similarly, the present Minister of State,

Nick Gibb, writes that ‘we must strive for high quality professional development to be the norm in all schools, to build the professionalism of teachers and improve teaching’ (DfE, 2016b). To this end, non-statutory standards (DfE, 2016c) and guidance (DfE, 2016a) for teacher development, written by the Teachers’ Professional Development Expert Group at its behest (DfE, 2016d; 2016e), have been published.

The tacit a priori logic underpinning the proposition appears irresistible. Teacher development inevitably improves the quality of teaching, thereby raising the quality of learning; this in turn improves desirable learner outcomes. Part of the appeal can perhaps be explained by the positive connotations of the terms ‘development’, ‘learning’, ‘training’, and ‘education’. These processes or activities are, on the face of it, desirable ones.

Although the proposition is intuitively plausible, and despite the eminent array of proponents, it is not substantiated by the best available, nomothetic empirical evidence. The most recent iteration of the well-reputed systematic review of meta-analyses conducted by Hattie (2015, p. 82) found that the mean effect size of professional development on learner achievement was medium (0.45), only moderately above the average effect size (0.40), and a decrease on earlier effect size findings (0.62 in Hattie, 2009; 0.51 in Hattie, 2012). Professional development was ranked only sixty-ninth out of 195 influences, or interventions, for its effect on learner achievement outcomes. Hattie’s finding is not new. He cites two systematic reviews from the 1980s, one by Harrison (Lawrence & Harrison, 1980) and the other by Wade (1985), which quantified the effect size of professional development on leaner outcomes as 0.47 and 0.37 respectively (Hattie, 2009, p. 120).

How might proponents reply to this evidence? One response might be to bemoan the poor quality of much teacher development. Timperley (2011, p. 1) cites an eloquent expression of this sentiment:

> For far too many teachers…staff development is a demeaning, mind numbing experience as they passively 'sit and get'. That staff development is often mandatory in nature…and evaluated by 'happiness scales'.

An appeal to the low quality of much teacher development does not salvage the proponents' position; in fact, it worsens it. Recent studies (Garet et al., 2016; Jacob et al., 2017), combined with several earlier ones (e.g. Garet et al., 2011; see Hill et al., 2013) suggest that even teacher development programmes exhibiting the features that researchers consider desirable (e.g. Cordingley et al., 2015) do not have a noteworthy effect on learner outcomes (Fletcher-Wood, 2017). In other words, teacher development, at its best, does not work especially well. The effect of the more commonplace deficit approaches to teacher development is no doubt weaker.

Another response open to proponents of teacher development would be to deny that the value of teacher development substantially resides in learner outcomes, including learner achievement outcomes. This, however, is an intractably difficult argument to sustain. There is a strong case that shows that learner achievement has a substantial impact on the life chances of learners (Wiliam, 2011). Achievement matters. Teacher motivation, well-being, and satisfaction, although of worth, are not ends in themselves; nor are changes to teacher belief and practice (Timperley et al., 2007, p. 19). This holds true for teacher pay advancement, teacher career progression, and educational leadership. Schools serve pupils, not teachers.

A third response involves accepting that the raison d'etre of schools is pupil learning, but denying that nomothetic evidence is appropriate evidence relating to learner outcomes. Hammersley has formulated a critique of educational systematic review methodology (Hammersley, 2001a) which resonates with critiques of the evidence-based practice movement more generally (Hammersley, 2001b; Biesta, 2007).

One problem with this response is that research with a more qualitative orientation leads to the same negative verdict on teacher development. Bubb et al. (2008), for instance, found that high performing schools could have weak professional development systems and that lower performing schools could have strong professional development regimes. At best, these researchers found a correlation between teacher development and school performance.

Another problem with this response is that proponents of teacher development tend to espouse quantified evidence such as nomothetic evidence. The OECD' s Programme for International Student Assessment (PISA) tests and the government's school performance metrics such as Progress 8 and Attainment 8 exemplify this. The government has explicitly endorsed evidence-based practice (DfE, 2014), especially practice based on nomothetic evidence (Goldacre, 2013). Judging professional development by criteria valued by its proponents is fair.

A third problem with the response is that the burden of proof would be on the proponent to show that nomothetic educational research evidence should be discarded as irrelevant even if it does not presuppose a technical-rationalist model of teaching. In neo-Aristotelian conceptions of professional practice that emphasis judgement (*phronesis*) (e.g. Heilbronn, 2008; Green, 2009; Biesta,

2015), for instance, the *phronimos* is not bereft of universal knowledge, but, rather, attunes such knowledge to the context (Dunne, 1993, p. 368). On this account, judicious teachers are cognisant of the inferential gap between decontextualised nomothetic research findings and their concrete teaching situation, but nevertheless give it due weight in their deliberations.

It follows that the evidence warrants the conclusion that the importance of teacher development has been significantly overstated by its proponents: scholars, authoritative organisations, Ofsted, and the government alike. If the widespread value judgement that teacher development is worthwhile in proportion to its effect on desirable learner outcomes is correct, then teacher development is, at best, of modest value.

1.2. My institutional context

My professional role is that of Leading Practitioner at Hilltop school (a pseudonym) in London. For the sake of relatability (Bassey, 1981), it is prudent to provide some details of the school's profile, approximated to inhibit traceability (Cohen et al., 2007). The school is a comprehensive girls' secondary academy that admits boys to its sixth form. 120 teachers, 15 teaching assistants, and 40 support staff provide for 1,500 pupils. The proportion of pupils with special educational needs is below average, as is the proportion of pupils who qualify for the Pupil Premium, an indicator of socio-economic disadvantage. The most current validated Progress 8 score is above average; results at A-level are average. In its most recent inspection, it was adjudged outstanding overall and good for teaching.

The designation of Leading Practitioner was introduced in 2013 to replace the Advanced Skills Teacher designation. Leading practitioners are senior leaders with two principal responsibilities: modelling excellent practice and leading the professional development of others (DfE, 2015a). Particular duties are naturally fluid and variegated.

One noteworthy duty is co-ordination of the school's twilight teacher development programme. In lieu of an in-service education and training (INSET) day, teachers are expected to attend a minimum of five one hour professional development sessions after school over the school year, or the equivalent pro rata for part-time teachers. Teaching assistants and support staff are invited to attend. Typically, the focus is on generic pedagogy and educational management; however, teachers are permitted to attend one team-specific session. Sessions are usually led by internal providers: teachers, leaders, and support staff; occasionally, external providers are enlisted. Although some sessions may be compulsory for all or selected teachers, in most instances teachers have licence to choose which ones they attend.

Teacher feedback on the sessions is positive: 85% of teacher ratings for all sessions in 2016-17 were 'useful'; only 1.5% of ratings were 'not useful'. Although my colleagues appear to be content with the programme, I harbour significant reservations. It may be that teachers are content with it for non-educational reasons; as data from one study indicated, twilight sessions may be 'a way of manipulating longer holidays' (Bubb & Earley, 2013, p. 7). I am not confident that it has any impact on teachers' practice, let alone on pupil outcomes. Anecdotal conversations with colleagues confirm this. Formal evaluation of impact is limited to the first of Guskey's (2002) five levels:

participants' reactions. Until recently, teachers have been sent a formal letter recognising supererogatory participation in twilight sessions. The celebration of mere attendance suggests that teachers are caught in an 'activity trap' (Odiorne, 1974) and that the programme is an instance of performativity (Lyotard, 1984).

Therefore, I have led alternative approaches to teacher development. Currently, over fifty teachers are voluntarily involved in supervising pupils from Years 8 to 13 through the Extended Project Qualification (EPQ), the Higher Project Qualification (HPQ), or the Foundation Project Qualification (FPQ): Level 3, Level 2, and Level 1 qualifications respectively in the national framework (DfE, 2017b). The qualifications are research based and designed to promote autonomous, self-regulated pupil learning. Supervision involves teachers working one-to-one with pupils to facilitate project investigation. It therefore seems different from traditional classroom teaching and may require different pedagogy. As centre co-ordinator of project qualifications, I have led training sessions for supervisors in the hope that through engagement in supervision teachers would develop new understandings, skills, and dispositions that were transferable to the classroom context.

The impact of supervision on pupil outcomes is positive, on the face of it. Pupils at the school are attaining well in the project qualifications. For example, in 2017, 95% of pupils (*n*=21) achieved A*-C in the EPQ. Moreover, pupils who participate in a project tend to do well in their other qualifications. This is consonant with the finding that participation in the EPQ is associated with a positive impact on pupil performance in other qualifications (Gill, 2017).

I had not, however, examined the impact, if any, of supervision on teacher development, and I therefore turned to the literature to ascertain what was already known. A literature search was conducted using the British Education Index database, which is well reputed (e.g. Sheffield & Saunders, 2002; Wellington, 2015) and appropriate to the national context. Search terms comprised ‘Extended Project’, ‘Extended Project Qualification’, ‘EPQ’, and the same terms for the HPQ and FPQ. I also used JStor, Google Scholar, and UCL Explore search tools. Because the abbreviations ‘EPQ’, ‘HPQ’, and ‘FPQ’ can have different meanings in other fields, the terms ‘school’, ‘colleges’, ‘pupils’, and ‘education’ were also included, each in turn.

There is a dearth of academic research relating to the project qualifications. Cartwright (2012; 2016) has sketched out some inchoate reflections on project qualification supervision. Three studies have considered, to a limited degree, pupil perspectives on the EPQ (Daly & de Moira, 2010; Stoten, 2013; Yeoman et al., 2017). One of these studies also focused on teacher perspectives (Stoten, 2013), though in relation to the EPQ per se, not in relation to teacher experience or teacher development. I revisit these studies in section 5.2.

Chapter 2: Literature review

The chapter considers the current state of knowledge about teacher development. It is divided into five sections. In the first section, I note that a surfeit of terms are used to denote, in some way, the concept of teacher development. I consider some of the ways in which teacher development has been defined and argue that each is wanting.

The next section gives a brief history of teacher development to throw some light on the conceptual confusion about the term. The key implication is that the concept is historically and ideologically embedded.

In the third section, I attempt to clarify the concept. I argue that it is best understood as a process the telos of which is teacher expertise. I note the nature of teacher expertise has been provisionally settled.

The penultimate section focuses on the nature of the process of teacher development. I note how many theorists have sought to understand this process a priori, an ill-fated undertaking given that learning is far too complex to encapsulate in a speculative theory. The process needs to be understood empirically.

In the final section, I add that there is also a need for new ways of thinking about teacher development. I suggest the literature on workplace learning, and especially the work of Eraut, as constituting one new way of thinking. I focus on Eraut's concept *working with clients*. I note that this concept had not emerged from empirical work in relation to teachers and had not reached theoretical saturation. I conclude that there is a need for grounded

theory empirical research into new and novel ways in which teachers work with pupils that focuses on teacher development.

Relevant literature was unearthed in two main ways. First, an expert in the field provided an initial, connoisseurial list of germane texts. The reference lists of these texts were subsequently used to identify further texts. Second, standard search tools, especially the British Education Index database, were used to extend coverage. For instance, the search terms ‘INSET’, ‘In-service education and training’, and ‘In-service training’ were used in Google Scholar. Results were filtered as required, for example, according to national context.

2.1. Conceptual confusion

Let me begin by attending to the terminological minefield. A myriad of names, and abbreviations, are used to refer in some way to the concept of teacher development. The main terms used to denote the *activity* or *process* are ‘development’, ‘learning’, ‘education’, and ‘training’. Terms used less frequently include ‘growth’, ‘improvement’, and ‘support’. The word ‘teacher’, ‘staff’, and ‘professional’ are often added to identify the role of the *individual* engaged in the activity or undergoing the process. The word ‘professional’ is, however, ambiguous. It may function grammatically as an adjective, rather than a noun, thereby serving to *qualify* or *attribute* the activity or process. Terms such as ‘pre-service’, ‘in-service’, ‘initial’, and ‘continuing’ are sometimes added to signify when the activity or process occurs in the individual’s career or professional lifetime.

Writers have combined, and then often abbreviated, these words in what seems like every conceivable way. Here is a sample: professional development (DfE, 2014); teacher development (Kraft & Papay, 2014); staff development (Bubb, 2012); professional learning (Timperley, 2011); professional learning and development (PLD) (Porritt et al., 2017); teacher learning (Ferris, 2016); teacher education (BERA & RSA, 2014); teacher professional development (Darling-Hammond et al., 2017); teacher professional learning (Opfer & Pedder, 2011); in-service education and training (James Report, 1972); continuing professional education (Cervero, 2000; 2001); continuing professional development (CPD) (OECD, 2014); and the longest, continuing teacher professional development and learning (CPDL) (Cordingley et al., 2015). This list is not exhaustive; some writers use the term ‘practice development’ (Wilson & Easen, 1995), and others write of ‘professional formation’ (Green, 2009), for instance.

The tendency is for these terms to be regarded as coterminous, and therefore they are often used interchangeably. In such cases, the disparity of the terminology is therefore a trivial matter, a semantic difference only. Some theorists draw distinctions between the terms to reflect nuanced but consequential conceptual differences that they believe either exist or ought to exist. This is evident from the title of chapter 1 of Timperley (2011): ‘From professional development to professional learning’. Porritt et al. (2017, p. 121) assert that the variation in terminology reflects theoretical differences. This assertion does sometimes hold true; for instance, Kelly (2006, pp. 505-506) rejects Evans’s (2002) use of the term ‘teacher development’ because, he argues, it does not admit of a distinction between teacher knowing and teacher

identity. These things notwithstanding, the labyrinthine variation in the terms used is already a sign that something has gone wrong.

The more entrenched problem, however, is the state of definitional confusion that exists in the field. Consider a putatively authoritative definition:

> Professional development refers to activities that aim to advance teachers' skills and knowledge, with the ultimate aim of improving their teaching practice. (OECD, 2014, p. 86)

Plainly, professionals such as lawyers, surgeons, and engineers do not engage in professional development to improve *teacher* skills, knowledge, and practice. So it is slightly imprecise. Because the term 'professional' renders meaning more reliant on the context, a specifically educational context would need to be posited for that meaning to be obvious. Teachers engaging in activities with the aim of improving their leadership skills, knowledge, and practice would be typically be described as engaging in professional development. The OECD's descriptive definition is therefore imprecise, inaccurate and lacks extensional adequacy (Gupta, 2010), the weakest form of definitional adequacy.

Now consider another, more elaborate definition:

> Staff development is an on-going process encompassing all formal and informal learning experiences that enable all staff in schools, individually and with others, to think about what they are doing, enhance their knowledge and skills and improve ways of working so that pupil learning and wellbeing are enhanced as a result. It should achieve a balance between individual, group, school, and national needs; encourage a commitment to professional and personal growth, and increase resilience, self-confidence, job satisfaction and enthusiasm for working with children and colleagues. (Bubb & Earley, 2007, p. 4)

This definition is a nominal, or normative, definition. A common criticism of nominal definitions is that they do not necessarily reflect contingent, real world

usage. Thus, a corollary of the definition is that cleaning, site team, and catering staff in schools ought to be regarded as having professional status, which is unusual. This is evident from the claim that staff development should 'encourage a commitment to professional…growth'. Nominal definitions can also be challenged on ethical grounds. The definition foregrounds the employer-employee relationship and is exclusive of those not in that relationship. Thinkers influenced by Marx might worry that this objectifies teachers as workers. This danger is ever present in the discourse about teachers as 'resources' (e.g. Earley, 1995), 'assets' (e.g. Bubb & Earley, 2007, p. 6), and 'capital' (e.g. Hargreaves & Fullan, 2012). A third criticism of nominal definitions is that they can be utopian. The definition of staff development is well-meaning but could reveal more about the hopes and wishes of its advocates than it does about staff development and its potential.

For good measure, consider a more recent definition of professional learning:

> Professional learning encompasses all the opportunities offered for teachers and leaders to learn something new, update skills, be informed of new developments, explore new techniques or resources, and refresh subject-specific knowledge. Such opportunities can be offered in a wide range of ways. (Porritt et al. 2017, p. 122)

The authors proceed to list examples of such 'opportunities', including courses, seminars, and reading articles. This is a descriptive definition with a purportedly ostensive element. The description is inaccurate. Neither an opportunity to learn, nor participation in activity designed to promote learning, constitute learning. For the natural object of learning is knowledge. Defining professional learning ostensively is difficult, given that learning may be intangible. However,

it is clear that attending courses or reading articles are not examples of professional learning per se; they are perhaps examples of professional learning *activities*. The definition thus lacks extensional adequacy.

Finally, consider the term ‘training’. This still features in educational discourse, a legacy of the seminal James Report (1972) which introduced the now well-worn term ‘in-service education and training’. For Heilbronn (2008, p. xii), the term is atheoretical and can be associated by some with low level, non-intellectual skills; for Bolam (1993, cited in Bubb & Earley, 2007) the term is reserved for practice-orientated short courses. However, in professions such as neurosurgery, training entails the mastery of advanced skills and theoretical subject matter, which can take many years. Heilbronn’s reasoning leads her to use the rather unwieldy term ‘initial teacher training and education’ (ITET), and Bolam’s definition, if descriptive, lacks extensional adequacy.

Empirical evidence supports the inference that the struggle to define key terms adequately is a sign of a field in disarray. One study concentrated on the term ‘continuing professional development’ across professions and found that ‘there is confusion regarding its definition…in both academic and practitioner literature, which extends to professionals themselves (Friedman & Phillips, 2004, p. 361). It is difficult to see how teacher development might be effective if there is little clarity over what the term means or what it is.

2.2. A historical perspective

It was Hegel (2001) who first appreciated that one way to understand a concept is genealogically, as a product of its history. Historical perspectives can

illuminate current educational problems (McCulloch, 2011). Therefore, to cast light on the nature of teacher development, I will now offer a historical perspective.

The concept of initial, pre-service teacher training can be traced back to the mid nineteenth century. Prior to 1970, it was broadly assumed that initial teacher training would suffice for a professional lifetime (Tomlinson, 1993, cited in Bubb & Earley, 2007, p. 5). Some in-service training was occurring (James Report, 1972), especially for uncertified teachers (Gardner, 1995). In 1970, Thatcher, then Secretary of State for Education and Science, commissioned Lord James to chair an enquiry into teacher education and training. The report was published two years later and bestowed ‘prime importance’ (James Report, 1972, §2.1) to in-service teacher training and education. The report claimed that ‘abundant evidence’ (§1.1), by which is meant widespread consensus (§2.3), supports the argument that in-service teacher training and education can ‘speedily, powerfully, and economically’ raise educational standards (§1.9). ‘It is no accident’, it is stated, that teachers who have benefited from in-service training and education tend to be ‘outstandingly effective and successful’ (§2.1), but the overall arrangements were deemed piecemeal (§2.5).

The James Report (1972) concedes that the term ‘in-service training’ is ‘very misleading’ because it refers to teacher participation in a disparate array of activities with different purposes, including evening meetings, weekend conferences, curriculum development, professional courses, postgraduate study, and secondments (James Report, 1972, §2.2). It is, the report claims, ‘convenient as a shorthand’ to denote participation in activities united by family resemblance (Wittgenstein, 1958) only. Later writers would enumerate much

longer lists of training activities; Bubb, for instance, lists at least forty-seven (Bubb, 2005).

Not all of the report's recommendations were enacted, such as the recommendation to release teachers from teaching duties for one term every five years (James, 1972, §2.2). The recommendations were never implemented coherently (Smith, 1999; Smith et al.,1999). Nevertheless, it has proven influential, bequeathing a vocabulary of in-service training and education (now abbreviated to 'INSET'), initial teacher training (now abbreviated to 'ITT') (§3.12), and induction, that has endured to the present day. The report paved the way for what was called the 'INSET revolution' (Natham, 1990; Bubb & Earley, 2007, p. 5), with increased funding and policy (Smith, 1999) in addition to more school-based INSET sessions from 1987 (Smith et al., 1999). The allocation in 1988 of five days dedicated to INSET, known as the Baker days (Wray, 1989), contributed to this increase.

The term INSET has been largely superseded by the term 'continuing professional development' which was coined by Gardner in the late 1970s (Todd, 1987) so that 'the purely educational element becomes one alongside others; a full professional life, good practice generally, career advancement, increasing capacity and well-earned profit' (Gardner, 1978, pp. 2-3). Over time, the term 'professional development' has become widespread in many contexts (Friedman et al., 2000) and is now probably ubiquitous in schools and colleges within and even beyond England (OECD, 2014).

The appropriation of the discourse of *professional* development is indicative of a belief that teacher performance cannot be enhanced by focusing on teaching practice alone; other structural factors such as status,

remuneration, and autonomy also have influence (Hargreaves, 1995). The case of Finland is pedestaled as evidence this belief (Sahlberg, 2015). But it is also indicative of ideology. The concept positions the improvement of client outcomes as but one aim amongst many. Historically, the professions have been traduced for serving their own interests, rather than their clients'; in 1906, Shaw's character Sir Patrick averred that 'all professions are conspiracies against the laity' (Shaw, 2011, p. 39).

Because professional development was not a natural feature of the centuries old established professions, teacher development was seen by some as deprofessionalising, especially given the low-level activities that it tended to involve (Hoyle & John, 1995). Some theorists viewed the concept of teacher development as part of a siege of the political right to impose neo-liberalism (e.g. Hartnett & Carr, 1995). Degrading teachers as in need of development, amidst a 'discourse of derision (Ball, 1990), serves this strategy well. The national curriculum effected by the Conservatives in 1988 prescribed what teachers taught, and the national strategies of New Labour, whose agenda was conspicuously neo-liberal (Whitty, 2008), prescribed how teachers taught. The autonomy, and hence professionalism, of teachers was being eroded (Forde et al., 2006).

But New Labour saw professionalism differently. In a consultation paper, it expressed its ambitions to reprofessionalise teaching. It reconceptualised teacher professionalism as client service, couched in the vocabulary of accountability. It also reconceptualised teacher professionalism as rationality, verbalised as evidence-based practice (DfEE, 1998). Plans were set out to introduce a new elite grade of teacher to lead professional development. Ideas

for a new grade of teacher, the Advanced Skills Teacher (AST), were under consideration by the Conservatives in the early 1990s (Leaton Gray & Whitty, 2010), in the light of their establishment in Australia (Watkins, 1994). The teacher grade was introduced by New Labour soon after its election in 1997 (Baker, 1998), based on little evidence. ASTs were expert teachers (Smith & Averis, 1998), extended professionals (Goodwyn, 2017), and senior leaders (Blake et al., 2000) who would lead the development of teachers and teaching (Smith & Averis, 1998; Sutton et al., 2000). The AST teacher grade was peremptorily discarded in 2013, though the decision was not based on evidence (Goodwyn, 2017).

The AST grade, like its descendant, the Leading Practitioner designation, can be viewed as inimical not only to teacher collegiality (Leaton Gray & Whitty, 2010) but also teacher professionalism itself. Rather than belonging to all teachers, genuine—'advanced'—expertise is confined to an elite. This is signified in the words of Hastings (2005) who claimed that ASTs existed to fight 'the evils of sloppy practice'.

The brief history of teacher development above explains why the term is conceptually confused. Hoyle (1983) usefully distinguishes between *professionality* and *professionalism*. Professionality, he stipulates, refers to the client-focused knowledge and skills of the professional. Professionalism refers, in contrast, to other professional qualities and dimensions, such as status, autonomy, and rationality. Because the nature of professionalism is vigorously contested, ideological (Eraut, 1994), and artificial (Crook, 2008), the concept of *professionalism* development (i.e. development of professionalism) is inherently contestable. The concept of 'in-service education and training' is coterminous

with the development of professionality and is itself rather nebulous, as its architects recognised. The concept of teacher development encompasses the development of *both* professionality *and* professionalism, amalgamating the nebulous with the contestable.

The brief history of teacher development also explains why professional development has failed to meet the hopes of its proponents. In-service training was introduced because there was a widespread consensus amongst different stakeholders including teacher unions. But it is a mistake to conflate consensus with evidence of effectiveness, as James (1972) does. Reality, not the proportion of believers, determines truth[1]. Similarly, the introduction of elite teacher grades to champion professional development in schools was not based on evidence; rather, it was based on political and ideological reasons. But authority and power, like consensus, do not determine truth, as King Canute is recorded as having demonstrated. The question of whether developing teacher professionalism, however construed, improves pupil outcomes is ultimately empirical. The irony is that the embracement of evidence based professional practice by successive governments has not itself been based on empirical evidence (Stone, 2017).

The key implication of my historical account of teacher development is that teacher development has been embedded over the course of almost fifty years and therefore is difficult to deracinate. The inextricable boundedness of teacher development to a concept now pervasive across the professions serves only to cement teacher development in place. Irrespective of its cogency, any

[1] Note: This is a precursor of and an allusion to the critical realist theory of propositional truth in Bhaskar.

argument that professional development ought to be abandoned encounters insurmountable problems of impracticability, like trying to stop the tide.

2.3. Clearing the conceptual ground

Given both that the concept of teacher development is confused and that it will endure, it is prudent to clarify it. Confusion about a concept is inimical to clear thinking about it. To clarify the concept, I will distinguish between its nature, what it is, and its telos, what it aims to achieve. This distinction I draw between nature and telos is not a sharp one; I am happy to concede that, to a significant, the two overlap.

As I showed in section 2.1, typically teacher development is construed as participation in activity; development is something that teachers *do*. Some authors appear to view teacher development as participation in *any* activity that leads to pre-specified teacher improvements (e.g. Bubb & Earley, 2007). This view is plainly too broad, and it rests on a category mistake (Ryle, 2000). The nature of *x* is categorically different from the effect of *x*. The OECD (2014), in contrast, restrict participation to activities specifically designed to improve teacher knowledge, skills, and practice. An example would be participation in an in-service training session. Alternatively, participation could be restricted to activities in which teachers engage with the *intention* to improve their teaching, for example, an English teacher reading works of literature to enhance their subject knowledge. But it is possible that a teacher participates in activities designed to promote improvement but not improve. To believe otherwise is to fall in to the ‘activity trap’ (Guskey, 2014).

The proponents of teacher development, cognisant of this, insist that, to escape the activity trap, teacher development activities need to be evaluated for impact (e.g. Bubb & Earley, 2011; Kennedy, 2013; King, 2014; Earley & Porritt, 2013). They often refer to Ofsted's verdict that 'The weakest link in the [developmental] chain was the way the schools evaluated the effectiveness of their professional development activities' (Ofsted, 2006, §43). They proceed to offer suggestions about effective impact evaluation. The underpinning belief is that the knowledge produced through impact evaluation will be used in some way to promote impact. Of course, impact evaluation per se does nothing to create or strengthen impact and is itself, ironically, susceptible of falling into the activity trap. An associated belief that a sharp focus on impact, especially at the design stage of developmental activity, will create or strengthen impact falls foul of the same malady.

The problem with viewing teacher development as an activity is that it renders development as an achievement term (Ryle, 2000). Because participation in activity does not necessarily achieve the desired outcome, it is therefore preferable to treat of teacher development as a *process*: something which happens to teachers, something that they undergo.

The most natural object of 'teacher development' is the teacher as a whole: his or her character, dispositions, and qualities, and thereby values, attitudes, and emotions, as well as his or her teaching and knowledge. It is hence ontological because it concerns what teachers are, the nature of their being. The notion of development *into* a teacher imputes deficiency and is appropriate for those being initiated into the profession; the notion of ongoing development *as* a teacher suggests a process of becoming expert or of

sustaining, strengthening, and broadening expertise. This resonates with the famous, and speculative, five stage model of skill acquisition advanced by Dreyfus and Dreyfus (1986), who famously characterised development as an ontological transformation from novice through competent practitioner to expert.

The telos of teacher development is, on this account, *expertise*. What is expertise? Expertise is sometimes conceptualised as epistemological. In a classic article, for instance, Shulman (1986) proposed that teacher knowledge comprised an amalgam of three categories of knowledge: 'subject matter content knowledge', 'pedagogical content knowledge', and 'curricular knowledge'. The introduction of the concept of pedagogical content knowledge, construed as teachable propositional knowledge, has proven influential, despite the apparent exclusion of ability knowledge. Empirical work has been conducted based on Shulman's model (e.g. Gudmundsdottir & Shulman, 1987), but not to substantiate the model. Because the model is speculative and therefore does not necessarily reflect the nature of real world teacher knowledge, it is unsurprising that a year later Shulman (1987) felt that it was necessary to interpose further categories, for example, general pedagogical knowledge. Around twenty years later, Abell (2008) argued that the concept of pedagogical content knowledge remains a useful idea, at least for researchers; however, this is to confuse usefulness with truth[2].

An empirical account of teacher expertise suggests that it is more ontological than epistemological. There is consensus on the nature of expertise in general (Ericsson et al., 2006), and extensive empirical work by Hattie (2003)

[2] *x* should be useful *because* it (*x*) is true.

has settled the profile of teacher expertise in particular (Goodwyn, 2017, p. 55). Of course, the settled nature of the profile does not entail that it is incontestable. Caution is needed to avoid committing the naturalistic fallacy (Moore, 1903). Just because teacher expertise is *x* does not entail that it ought to be *x*. This notwithstanding, the profile specifies dimensions and attributes of expert teaching, interweaving expert teacher beings, doings, knowledge, and capacities (Hattie, 2003, pp. 6-10). Strictly speaking, an ontological conceptualisation of the expert teacher is restricted to teacher beings. Nevertheless, many of the attributes Hattie identifies are irreducible to practice or knowledge; for example, the proposition that expert teachers have 'multidimensional complex perception' (ibid., p. 7). It is noteworthy that Hattie found that expert teachers positively influence learner outcomes, including learner achievement; this, he comments, is perhaps the 'gold standard' of teacher expertise (ibid., p. 9), the telos of teachers' development.

An implication of this empirically grounded conceptualisation of teacher expertise is that valid impact evaluation of teacher development is rendered far more difficult than advocates of impact evaluation appreciate. Impact evaluators must be able to assess expertise, which is a considerable challenge in itself. How, for example, can assessor assess a teacher's way of perceiving? They must also be able to establish a causal link between participation in teacher development activity and development of expertise. Limiting impact evaluation to phenomena more amenable to measurement, such as pupil test scores, is of little service because it is reductivist.

Teacher development, then, is best understood as a process rather than an activity. This is not to deny that development is sometimes spoken about as

an activity, for example, “Dan is developing his expertise” or “Jan is developing his marking skills”. It is to deny that the telos of development is something in which teachers can participate. Teacher development is an ontological process, in which, over time, novice teachers become competent and then expert. An expert teacher is one who tends to influence learner outcomes through attributes such as multidimensional complex perception.

2.4. Exploring the concept

The emphasis on impact evaluation is perhaps indicative of a desire to understand the *process* of teacher development in order to enhance it. This gives rise to question. What conditions are necessary for the process to occur? Research supports the claim that teaching experience is a necessary condition of teacher development. One study found that increased teacher experience leads to improvements in teaching and learning (Papay & Kraft, 2015). However, research also supports the claim that experience alone is not sufficient for expertise development. Rivkin et al. (2005) found that, after three years’ experience, teacher development tended to cease insofar as teachers tended not to strengthen their influence on pupil outcomes.

As Goodwyn (2017) notes, not all experienced teachers have acquired expertise. Indeed, it is quite possible to be a professional teacher and not be expert. The national teachers’ standards of England (DfE, 2011) set out the minimum requirements that professional teachers must satisfy. These standards do not entail expertise. Standard two, for instance, states that teachers are ‘accountable for pupils’ attainment, progress, and outcomes’. But

accountability is not an empirically grounded dimension of teacher expertise. Similarly, standard six states that teachers should ‘encourage pupils to respond to’ feedback, a standard that novice teachers can easily satisfy.

Teaching experience, then, is a necessary but not a sufficient condition of *expertise* development. This raises the question of whether all teachers can become expert, that is, satisfy the criteria for expertise set out by Hattie (2003). The existence of expert teachers would show that at least *some* teachers can become expert. However, there is a lack of adequate research to establish the proportion of teachers who have attained expertise. It is not even clear to what extent, if any, teachers with elite grades satisfy the criteria. For example, although appointments to the designation of Advanced Skills Teacher were quality assured (Smith & Averis, 1998; Sutton et al., 2000), there are reasons to doubt the rigour of the quality assurance process itself. For one, the national standards against which ASTs were assessed are not evidence based. Note that I am claiming here that the standards *themselves* were not evidence based, not that candidate ASTs could be admitted to the AST grade without adducing evidence that they had met the standards. They did (Smith & Averis, 1998; Sutton et al., 2000).

It is plausible that the capacity of all teachers to develop is limited because humans are finite beings and that this capacity is likely to vary amongst teachers because, as evolutionary theory postulates, humans themselves naturally vary. This being the case, it follows that capacity for expertise is a necessary, but not a sufficient condition for expertise development. Precisely where the limits are, however, is difficult to specify in advance. The corollary of this is that a teacher can be fully developed in relation

to potential for development but not be an expert teacher. It is therefore a mistake to conflate teacher development with teacher quality, as some writers implicitly do (e.g. Bubb, 2012).

Are teaching experience and teacher capacity for development jointly sufficient for the development of expertise? The nature of teacher development tends to have been explored through the positing of a priori theories or models of *learning*. On these accounts, a teacher learns to be an expert: an ontological undertaking. Different theories underscore different dimensions, or conditions, of the teacher learning process, such as experience (e.g. Kolb, 1983); reflection (e.g. Schön,1991); communal participation (e.g. Lave & Wenger, 1991); socio-cultural factors (e.g. Engeström, 1987); craft technique and skills (e.g. Grimmett & MacKinnon, 1992); and evidence-based decision making (e.g. NCATE, 2010). Although each theory offers a new way of thinking about the learning, and therefore developmental, process, none is based on empirical evidence. They are speculative and may therefore not necessarily adequately reflect the real world process of teacher development.

One learning theory that is evidence-based is set out by Bransford et al. (2000) and championed by Timperley (2011). The theory maintains that adult learning is not significantly different from child learning. Distinguishing between pedagogy and andragogy, as Knowles (1980) does, is therefore a mistake. The theory postulates that teacher learning comprises three iterative, interwoven processes: cueing and retrieving prior knowledge; awareness and integration of new information and skills into value and belief systems; and creating dissonance with current values and beliefs (Timperley et al., 2007, p. 8). Timperley, informed by a meta-analysis assessed by independent peers as

rigorous (Cordingley et al., 2015), went on to formulate, trial, and refine a new approach to teacher learning, which she articulates in Timperley (2011). At its heart is a teacher enquiry cycle. Teachers first identify pupil learning needs and then their own, corresponding learning needs; next, teachers engage to meet their own needs, leading to teachers engaging pupils in new learning experiences, which are assessed for impact.

Timperley therefore proposes that the concept of professional development is replaced with the concept of professional learning. She advocates a paradigmatic shift to professional learning: active, systematic, reflective teacher enquiry based on evidence of learning in particular contexts and focused sharply on learner outcomes (Timperley, 2011). There is some evidence that this approach is effective (ibid., p. 3), although this evidence is not readily generalisable, given the central involvement of Timperley herself, a highly informed, highly motivated project leader. Practically, the approach may not be sustainable. It demands significant investment by teachers at a time when they are already overworked (DfE, 2015b). Theoretically, the approach tends towards restrictive learning (Evans et al., 2006), underplays the possible social dimension of learning highlighted by other theorists (e.g. Engeström, 1987; Lave & Wenger, 1991), and neglects disciplinary perspectives. Without further argument and evidence, Timperley's replacement cannot be endorsed.

The fundamental problem with all learning theories is that the process of teacher learning and development is far too complex to be adequately theorised (Pring, 2015). This means the processes of facilitating, potentiating, or expediting teacher development are also complex. Approaches designed to

strengthen teacher development activity such as impact evaluation or teacher enquiry cycles are inevitably oversimplifications.

2.5. Resolving the aporia of teacher development

It is therefore prudent to return from theory to the world of practice. What should schools do in relation to teacher development? It is not feasible to *abandon* it because, as shown above, it is a historically and ideologically embedded concept-in-use. Equally, *replacing* it with alternative concepts such as Timperley's concept of professional learning is not ideal because the alternatives themselves are flawed. *Strengthening* teacher development does not seem to have worked in the past. At its best, teacher development has only a modest impact on pupil outcomes.

If professional development ought to be neither abandoned, replaced, nor strengthened, then perhaps it needs to be *diminished* through deprioritisation, strategic compliance, and activism. Deprioritisation, as distinct from abandonment, is warranted by its moderate efficacy. Strategic compliance (Gleeson & Shain, 1999) is expedient in satisfying performative requirements whilst maintaining focus on valued pupil outcomes (Orr, 2009). Activism is expedient to challenge misguided policy and practice, such as Ofsted's (2017, p. 45) insistence that professional development must give rise to 'highly effective teaching'. However, activism and strategic compliance consume energy and time, diverting attention away from teaching and learning. More seriously, questions of integrity also surface: Teachers and schools would be

accepting something without being committed to it in principle. *Diminishing* professional development is not ideal.

An aporia has been hit upon: abandoning, replacing, strengthening, and diminishing teacher development are all unacceptable. There are, I think, two principal ways of resolving this aporia. The first resolution is to call for more empirical research into the developmental process, taking cue from Hill et al. (2013). Ideally, such research avoids a priori learning and development theory which, as I have argued, inevitably oversimplifies an irrevocably complex process. Also, such research needs to regard teacher development as a process rather than an activity; a slew of scholars have sought to understand, almost ad nauseam, how teacher development, qua activity, can be rendered more effective (e.g. Desimone, 2008; Earley & Porritt, 2013; Stoll et al., 2012; Cordingley et al., 2015; Darling-Hammond et al., 2017).

The second resolution is to provide new ways of thinking about teacher development. The field of workplace learning tends to have been ignored in education (McNamara et al., 2014), although, according to Philpott (2014), Eraut's work has had some purchase. Eraut's (2007) empirical research has grounded a tripartite typology of early career professional learning: (a) work processes with learning as a by-product, (b) learning activities located within these processes, and (c) learning processes at or near the workplace. The effectiveness of these processes and activities is contingent on learning factors such as challenge and on contextual factors such as interpersonal relationships (ibid., p. 418). Noteworthily, Eraut identifies *working with clients* as an example of category (a):

> *Working with clients* also entails learning (1) about the client, (2) from any novel aspects of each client's problem or request and (3) from any new ideas that arise from the encounter. (ibid. p. 411)

Eraut's research concerns early career learning across many occupations; he cites engineers, nurses, and accountants in relation to the concept *working with clients*. The findings may not apply to teachers later in their careers. Also, it is natural that the concept is undertheorised, given that it is elemental within his general theory. The concept did not reach theoretical saturation (Glaser & Strauss, 1967), so it is conceivable that further data might lead to a more fine-grained theorisation of *working with clients*.

What Eraut offers is a new way of thinking about teacher development. Teachers develop expertise as a by-product of working in new and novel ways with pupils. There are many ways in which teachers work with pupils, the most typical of which is classroom teaching. Work that is different may induce the cognitive and affective dissonance that some researchers (Bransford et al., 2000) have found is integral to learning. Schools could therefore seek to cultivate new forms of teacher-pupil work for the betterment of teacher development.

2.6. Summarising the argument

Let me summarise the argument that I have adduced in this chapter. I have argued that there is a need for grounded empirical research into how teachers develop through teacher-pupil work, especially forms of work that are different from the everyday ways teachers work with pupils. One premise is that teacher development cannot be abandoned and ought not to be replaced, diminished,

or strengthened; rather, it needs to be rethought and researched in different ways. This relates to another premise that, hitherto, most research has focused on teacher development as a discrete activity that needs facilitating rather than as a by-product of teacher work.

Chapter 3: Research method

In chapter 2, the need to formulate a theory of whether and how teachers develop from *working with clients*, especially in new and novel ways, was established. In section 1.2, project qualification supervision was identified as a distinctive way in which teachers can work with pupils that is under-researched. In this chapter, I set out an empirical method for formulating a theory of how, if at all, teachers develop through project qualification supervision.

3.1. The nature of the research

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3.2. Research questions

A research question is an interrogatory question that makes explicit the object of empirical research (Bryman, 2012, p. 9). Methodologists assert that research questions are important. For instance, Blaikie (2007, p. 6) contends that research questions ‘are the foundations of all research’. A maximum of two or three overarching research questions is suitable for most small-scale projects (Blaxter et al., 2006, p. 34).

The research question is as follows:

- What are the perspectives of teachers at Hilltop school (pseudonym) on the impact, if any, of supervising school pupils' self-directed projects on teacher development?

The *topic* is teacher development, an objective ontological process. The *site* is Hilltop school. The *participants* are teachers at Hilltop school with experience of supervising at least one pupil through a project qualification.

According to some theorists, the nature of the research question dictates the general nature of the research strategy (e.g. Pring, 2015, p. 6; Blaikie, 2007, p. 2). The term 'research strategy' refers to the overall approach to answering the research question. It is true that a question sets limits on the kinds of answers, and ways of answering, it can admit. Nonetheless, it is also true that there can be different kinds of answers and ways of answering. It is therefore more precise to establish an *appropriate* research strategy rather than the *correct* one.

3.3. Virtue theory paradigm

A paradigm, I understand, refers to the ontological, epistemological, and axiological theory, explicit and implicit, that frames researcher thinking, being, and doing, including positionality. The term was famously championed by Kuhn in his landmark *The Structure of Scientific Revolutions* (1962). For O'Toole and Beckett (2013, p. 26), it is, or ought to be, the cornerstone of a research strategy.

It is common to distinguish between two principal research paradigms: positivism and constructivism. Positivism has its origins in Comte's *Discourse of*

the Positivist Spirit (1844). It can be characterised as conceiving the social world as similar in kind to the natural, physical world. It is associated with the premise that social phenomena are mind-independent objects. The researcher seeks to describe these objects and discover causal relationships between them. Descriptions and discoveries are cognitive, verifiable, and replicable. Their truth is contingent on correspondence to objective social phenomena.

Constructivism, also called ‘interpretivism’ and ‘naturalism’, can be characterised as conceiving social reality as *essentially* different from the natural world. It can be traced back to ethnographic and ethnologic work by colonial anthropologists in the nineteenth century (Lienhardt, 1964). Constructivists tend to maintain that social phenomena are mind dependent and therefore subjective. The researcher seeks to interpret these subjectivities – meanings, understandings, lived experiences – and is therefore implicated in the representation. Truth therefore is a co-construction: consensual or negotiated. Because subjectivity is particular, truth is contextual.

The two paradigms need cautious treatment. Constructivism is itself internally heterogeneous and contested (Morrison, 2007; Pring, 2015). More pointedly, as Pring (2015) argues, the opposition between positivism and constructivism is a ‘false dualism’. Few if any modern researchers subscribe to positivism; rather, the term is used by its detractors as a straw man (Morrison, 2007). Constructivism itself is problematic. For example, its anti-realist ontology entails that constructions cannot be assessed against reality. It leads to epistemological relativism and a rejection of objective truth[3]. The plea that some

[3] Alethia.

constructions are better than others because they are more nuanced or more detailed (Lincoln & Guba, 1985) seems to beg the question. Detailed and nuanced constructions are presumably better because they capture perspectives more faithfully.

It is therefore not prudent to adopt a positivist or a constructivist paradigm. The other popular paradigm, namely critical theory (Habermas, 1972), is not an appropriate alternative because neither research question is suggestive of any emancipatory dimension. Hence, it is necessary to turn to another paradigm.

As Fancourt (2008) contends, all educational research could embrace virtue theory, a largely untrodden paradigm. This paradigm posits an epistemology of epistemic virtue. The notion that propositional knowledge (*episteme*) is true belief can be traced back to Plato's *Theaetetus*. Later philosophers added a third, warrant condition, justification, to preclude lucky true beliefs as knowledge; however, in a seminal article, Gettier (1963) demonstrated that even a justified true belief could still suffer from epistemic luck and therefore not constitute knowledge. Epistemologists responded to Gettier's paper in various ways. For instance, reliabilists such as Goldman argued that the subject *S*, knows a proposition, *p*, if *S* believes *p*, if *p* is true, and if *S*'s belief in *p* is caused by a reliable cognitive process, *r*. The flaw with this externalist theory is that there is no intrinsic reason to value a true belief formed through r from a true belief not formed through *r* (Sosa, 2007).

As a consequence, epistemic virtue theorists revised the reliabilist account by replacing the *r* condition with a *v* condition: A true belief must be formed through the exercise of intellectual virtue, *v*. Given that virtues are

intrinsically more valuable than vices, propositional knowledge is, regardless of context, more valuable than mere true belief (*doxa*). Sosa (2007) provides the classic account of this. Propositional knowledge, what he calls reflective knowledge, has three elements: accuracy, adroitness, and aptness. An accurate belief is one that is true. An adroit belief is one that has been formed through the exercise of an epistemic competence. The apt condition is the key one: *S* must believe the accurate belief, *p*, because of *S*'s adroitness, not through epistemic luck.

Therefore, pace positivism, a virtue theory paradigm acknowledges that the researcher is necessarily implicated in the researched; propositional knowledge emanates from the researcher's virtues. Pace constructivism, virtue theory maintains scope for the assessment of constructions for truth: the truth or accuracy condition.

Virtue epistemology is not homogeneous. For example, Axtell (1997) distinguishes between two main orientations: virtue reliabilism, which emphasises cognitive *faculties, and* virtue responsibilism, which emphasises cognitive *traits*. However, as Battaly (2015) argues, there is no compulsion to pick either faculties or traits. Both contribute to intellectual flourishing.

3.4. Grounded theory research approach

Once a research paradigm has been appropriated, it is advisable to identify a suitable research methodology, or approach (O'Toole & Beckett, 2013, p. 27). An approach is a general method or a system of methods.

Grounded theory is one approach to research. It was pioneered by Glaser and Strauss (1967), who were influenced by symbolic interactionist sociology and pragmatist philosophy. Glaser and Strauss later evolved grounded theory in different but positivistic ways (Charmaz, 2014). Other writers grounded theory in other ways; for example, Charmaz (2006; 2014) expounded constructivist grounded theory and Clarke (2005) championed a postmodern version. It is therefore compatible with different paradigms and theoretical orientations underpinning research.

The grounded theory approach is hence best understood as a 'constellation' of methods (Charmaz, 2014). All versions seek to discover, construct, or generate theory, rather than apply or test it, and all versions achieve this through empirical research into specific instances. This has led some methodologists to characterise grounded theory as inductive; nonetheless, there are compelling arguments that grounded theory involves abductive reasoning (Reichertz, 2010). Grounded theorists use the term 'analytic induction' to refer to this abduction (Suddaby, 2006).

The corollary of this is that data collection and data analysis proceed *iteratively* (Orton, 1997). Initially, data is collected, according to theoretical need, from an initial convenience sample (Morse, 2009). This data is then analysed, which gives rise to further theoretical questions, which in turn

demands further data. A new sample is identified using the *theoretical sampling*: ‘Sampling directed by the evolving theory' (Strauss, 1987, p. 21). Data is gathered from that sample and then analysed, with existing and incoming data typically compared using the *constant comparison method*. This process of collection, analysis, and theoretical sampling proceeds until *theoretical saturation*, when theoretical needs are satisfied (Morse, 2004) and the theory is comprehensive, parsimonious, complete, and useful and has purchase (Glaser, 1978).

A criticism of grounded theory approaches is that they lead to context-dependent theories that cannot be generalised to different contexts (Jironet, 2002). However, this criticism is flimsy. Arguably, all educational research leads to context-dependent knowledge (Flyvbjerg, 2004) because education is context-thick. Moreover, no educational context, however distinctive, is entirely dissimilar from other contexts (Pring, 2015). Therefore, the description of context in section 1.1 is designed to promote relatability (Bassey, 1981).

Another criticism of grounded theory approaches is that it ignores pre-existent theory (Hammersley 1989). This criticism turns out to be an advantage, however, when pre-existent theory is either speculative or from non-educational contexts. It is true that grounded theory is an appropriate approach when there is a *lack* of theory in a given area (Creswell & Poth, 2018); it is equally true that it is appropriate when pre-existent theory is inadequate. There is a dearth of empirical research into teacher development through working with pupils, particularly as project qualification supervisors. The wider theory relating to teacher development is inadequate because it oversimplifies an irrevocably complex process. Grounded theory can place pre-existent theory into abeyance

(Henwood & Pidgeon, 2003), only drawing from it if it best explains emergent data.

Grounded theory accommodates both qualitative and quantitative research (Charmaz, 2014), although since its inception it has been associated with the former. It is conventional to distinguish between quantitative and qualitative research in education and the social sciences (Basit, 2010), although there is little consensus amongst methodologists about the nature of qualitative research (Kvale, 2007, p. x). Some authorities overtly conflate qualitative research with constructivism (also called interpretivism and naturalism). Denzin and Lincoln (2003, p. 3), for instance, write that ‘qualitative research involves an interpretive, naturalistic approach to the world’. It is plausible to maintain that qualitative research tends to be associated with individual perspectives, small sample sizes, rich data, nuanced meanings, depth, induction, iterativity, hermeneutics, and reflexivity, although none of these features is necessary or sufficient.

A simple way of understanding the ubiquitous quantitative-qualitative divide is provided by O’Toole and Beckett (2013, p. 25). Quantitative research involves measurement to answer research questions, whereas qualitative research involves judgement rather than measurement. Expressed in this way, it is possible for a research project to include both quantitative and qualitative elements, which may explain the current popularity of mixed methods approaches. Therefore, although the research questions suggest research that is in the main qualitative, this does not preclude some degree of quantification.

3.5. Participant characteristics

The quality of the sample contributes to the quality of a grounded theory. A quality sample comprises ‘excellent participants’ (Morse, 2007, p. 231): reflective, articulate, and willing participants with relevant experience. Therefore, these criteria were used to select participants from the fifty-two teachers involved in project qualification at the school. In grounded theory, a demographically diverse sample is not necessarily helpful because it can increase data variation and complicate theorising (Morse, 2007), and therefore factors such as gender, race, and sexuality were not taken into account when sampling.

Seven teachers participated in the research comprising one mathematics teacher, three teachers of humanities subjects, one teacher of English, one science teacher, and one teacher of applied learning. All had experience of supervising more than one pupil in the past, and all but one was presently engaged in supervision. Two participants had supervised pupils in previous schools in which they had worked. Three participants were senior leaders in the school. Three other participants had a designated teaching and learning responsibility (TLR).

3.6. Data collection: Semi-structured interviews

The interview is a common data collection method in social science research (Brinkmann, 2014, p. 1008). A research interview is a dialogical interaction between at least one interviewer and one interviewee to gather data. The semi-structured research interview is the most popular kind of qualitative interview

(ibid., p. 1009). It is an interview in which a schedule, or guide, with preconfigured questions and topics is used flexibly, with scope for deviation and responsive questioning and comments (see Wengraf, 2001). As Gadamer (1975) eloquently expresses it, a true dialogue has its own spirit that guides interlocuters as much as they guide it. The semi-structured interview affords sufficient flexibility for in-depth probing and the collection of rich data whilst also affording sufficient structure for emergent theory to direct data collection. It is therefore an apt instrument in grounded theory research designs (Charmaz, 2014, p. 85).

Seven interviews were conducted of which zero were follow-up interviews. Where possible, interviews took place in a quiet, private school office. Such venues are conducive to successful interviews (Davies, 2000, p. 83). Recoding interviews using good quality equipment is ‘highly recommended’ (Morris, 2015, p. 69). Therefore, each one was recorded using the Olympus DS-50 digital voice recorder. The briefest interview lasted 25 minutes; the longest interview lasted 54 minutes. The longest interview was ended to minimise the risk of ‘interview fatigue’ (Bampton & Cowton, 2001). It was not always possible to conduct data analysis between interviews, which placed some constraints on theoretical sampling.

Seidman (2006, pp. 38-39) exhorts research interviewers to pilot their interview approach in order to refine it. A pilot is a pre-test of a research instrument (van Teijlingen & Hundley, 2001). Before the first substantive interview, I carried out a mock interview with a teacher from another school conversant with project qualification supervision. Although outcomes of this pilot were trivial, it did raise my confidence.

Before each interview, including the pilot, I designed an interview guide, a script that structures the interview course, including suggested questions and an outline of topics (Kvale, 2007, pp. 56-57). It is traditional to divide interviews into stages. Legard et al. (2003) divide interviews into six stages: (i) arrival; (ii) introduction; (iii) beginning the interview; (iv) during the interview; (v) ending the interview; and (vi) after the interview. This division is more detailed than most others and was used to structure my own interview guides (e.g. Appendix 1).

Prepared questions were formulated based on theoretical concerns (Glaser & Strauss, 1967). Initial questions were easy in nature to cultivate a safe interview environment (Rubin & Rubin, 2012, p. 109). A smooth start establishes trust, build rapport, and encourages participation (Frey & Oishi, 1995, p. 100). It is helpful to trial preconfigured questions with someone neutral (Gillham, 2000, p. 21). I therefore arranged for a senior leader from another school to play the part of critical friend and provide feedback on each question by telephone.

It is important that interviewees understand questions. Framing questions in language familiar to interviewees promotes this (Patton, 1990, p. 296). Therefore, the language of academe was eschewed. It is also important that interviewees are only asked questions that they are positioned to answer, such as questions about their experiences, values, and feelings (Patton, 1990). Consequently, all of the questions posed concerned the ‘life world’ (Habermas, 1984; 1985) of teachers. In addition to being comprehensible and answerable, questions must also be phrased sensitively. The purpose of a research interview is enquiry, not interrogation; exploration, not imposition (Barone & Switzer, 1995).

Questions were not asked if they could be answered using another method such as documentary analysis of examination board materials (Morris, 2015). Follow-up questions and probes were not planned in advance because this is non-dialogical to a significant degree. During interviews, the following interviewer techniques were drawn upon:

- *Paraphrasing:* The interpretation of the interviewee's words by the interviewer to clarify and explore meanings (McMurray et al., 2004, p. 250)
- *Philosophical questioning*: Responsive use of different kinds of questions: (a) clarificatory questions; (b) questions that probe reasons and evidence; (c) questions that explore alternative views; (d) questions that test implications and consequences; and (e) meta-questions (Fisher, 2003, pp. 154-155).
- *Repeating:* The repetition of a key phrase articulated by the interviewee to encourage reflection and elaboration (Gillham, 2000, p. 50).

Interview guides and techniques were used dialogically rather than formulaically. For example, a prepared question was not asked if the interviewee had already answered it through previous responses (Morris, 2015, p. 43).

3.7. Data analysis: Grounded theory methods

The first stage of data analysis was transcription. It is inevitable that some meaning is lost in this process. Transcription standards serve to preserve meaning by enhancing 'descriptive validity' (Maxwell, 1992). Given that

discourse itself was not the object analysis, standards adopted by discourse analysts were deemed inappropriate. Instead, the conventions of Torrance and Pryor (1998) were used (Appendix 2) because they served to preserve sufficient meaning. A transcript excerpt is included in Appendix 3. In addition to the conventions, transcripts are numbered in chronological order from 01 to 20; for example, ‘Transcript 01’. Line numbers were added. These additions permitted quotation referencing in the theory presented in the next chapter.

After transcription, grounded theory analytical methods were used:

- *Constant comparison:* Ongoing comparison of new data with existing data (Glaser & Strauss, 1967). Constant comparison incorporated ‘negative-case analysis’ (Lincoln & Guba, 1985) without forcing the data (Charmaz, 2014).
- *Core category:* The most abstract analytic category (Corbin & Strauss, 2008). Charmaz’s (2014) concern that pre-configuring a core category forces the data was allayed by (a) identifying it quantitatively based on emergent conceptual content and (b) not requiring that it encompass all such content.
- *Focused coding:* Refining and synthesis of initial codes and the development of increasingly abstract categories (Charmaz, 2014).
- *In vivo codes:* Use of participants’ terms in coding (Charmaz, 2014).
- *Initial coding:* Conceptual labelling of ‘fragments of data’ (Charmaz, 2014, p. 109). Initial coding comprised of ‘line-by-line coding’: conceptually labelling each line of data (Glaser, 1978). This is most appropriate form of initial coding for data relating to empirical questions (Charmaz, 2014, p. 125).
- *Member checking:* Asking participants to check interpretations to promote research credibility (Lincoln & Guba, 1985; Erlandson, 1993). Grounded

theory analyses must be recognisable to participants (Glaser & Strauss, 1967). The method of *repeating*, mentioned above, was used during interviews to this end. If any significant ambiguity was hit upon during data analysis, relevant participants were invited to clarify their meaning, where possible, through an informal conversation. A provisional copy of final analysis was sent to one participant, who was invited to provide feedback. Feedback was integrated into the final analysis as appropriate.

- *Memos:* 'Informal analytic notes' to facilitate theory formation (Charmaz, 2014, p. 162). Reflexivity was used so that interpretation was fair. Reflexivity comprises subject matter criticism, methodological criticism, and self-criticism (Jackson, 1997). Reflexivity is evidenced in memos (e.g. Appendix 4).
- *Theoretical sampling:* Sampling directed by emerging theory (Strauss, 1987, p. 21).
- *Theoretical saturation:* When theory is well-developed and readily explains new data (see Morse, 2004), albeit indeterminately, given that new data could always need further explanation. Saturation as thoroughness does not necessarily entail a 'vast number' of interviews (Rubin & Rubin, 2012, p. 63).
- *Theoretical sensitivity:* Conceptual content emerges from data (Glaser, 1978; 2002). Superimposing pre-existent theoretical concepts on data 'contaminates' analysis (Glaser & Strauss, 1967, p. 37). A 'critical agnosticism' (Henwood & Pidgeon, 2003) towards these inherited concepts was adopted: They were only used if most consonant with the data.

Data analysis software, NVivo 11 (Nvivo, 2017), was used to facilitate the application of these grounded methods. Its free node feature was used for initial

coding; its memo and annotation features were used for the writing of analytic memos. The sources feature was used to store digital audio and transcript documents. The use of this software enhances systematicity (e.g. Bazeley, 2007) and facilitates the creation of an ‘audit trail’ (Halpern, 1983).

3.8. Ethics

It is imperative that research is ethically rigorous. The research complied with the most applicable ethical guidelines (BERA, 2011, 2018; UCL, 2017). It was also consonant with institutional policies, including health and safety and safeguarding and child protection policies. The researcher had an up-to-date Disclosure and Barring Service Enhanced Certificate (Number: XXXXXXXXX; Date of issue: XX.XX.XXXX). Formal ethical approval by University College London was granted prior to data collection.

The consequentialist ethical principles of non-maleficence and beneficence were upheld. One potential harm of the research was to add to participants’ workload. The need to reduce teacher workload has been identified by the government (DfE, 2015b). This cost was deemed to be offset by the benefits for teachers of engaging in meaningful reflection and interview discussion about their own professional learning. This benefit may be therapeutic (Drury et al., 2007). The findings would inform school decision-making about its professional development system, to the benefit of participants.

The research also upheld the deontological ethical principle of voluntary informed consent. Participants were invited to be interviewed by personalised

email (Appendices 5 & 6). To promote natural workplace relationships, invitations were not phrased formally. For the sake of transparency, the invite outlined the purpose and intended use of the research. Voluntary participation and opt-in were emphasised. At least two days' lag time was afforded between invite and interview. Immediately prior to the start of each interview, an oral reiteration of the nature of the research and of voluntary participation was given. The right of withdrawal without negative consequence was underscored. Participants were then asked to provide signed written consent before the interview began (Appendix 7).

Participants' moral right to privacy and confidentiality was safeguarded, and the research complied with the Data Protection Act (1998). Audio recordings were transferred and then erased from the digital recording device. Recording and transcript files were stored in an encrypted electronic folder. Anyone requiring access to these files, such as quality assurers, needed to sign a legally-binding non-disclosure agreement (Appendix 8). Shared files were redacted if needed to inhibit traceability. Files will be securely destroyed after quality assurance processes have ended. Names were anonymised in transcription, and anonymity was maintained thereafter. A provisional copy of data analysis was distributed to participants for member checking. Those who wished to be identified with their comments needed to provide signed written consent (Appendix 9). Written permission from one participant was sought so that a one page excerpt from a transcript could be included in the final dissertation as an appendix for illustrative purposes (Appendix 10).

Member checking helped to make sure that representations and interpretations were fair, promoting justice. More broadly, the research gives

voice to teachers, constituting a modest contribution to democratic ends. A summary of the research and its findings was disseminated to all participants, and all participants were invited to attend a one hour dissemination session on 24 April 2018. This closed the feedback loop and may have itself contributed to teacher development. Attendance was compensated by the equivalent of one fifth of day time off in lieu because of institutional arrangements for twilight continuing professional development.

Chapter 4: Findings

This chapter is structured according to conceptual content: from core category through subordinate categories to constituent concepts. This foregrounds analyticity. The proportion of references to each category or concept is indicated as a percentage in parentheses, for example ‘(9)’. This quantification renders explicit the groundedness of conceptual content in the data. Appendix 11 provides a screenshot of the coding structure in NVivo. Variation is indicated where appropriate with graded qualifiers. For example, ‘One’ refers to the first quartile; ‘some’ refers to the second quartile; ‘many’ and ‘most’ refers to the third quartile; and the ‘majority’ and ‘all’ refers to the fourth quartile. The use of qualifiers helps to avoid unfair generalisation whilst maintaining fluency. Selected quotations that illustrate and illuminate conceptual content are italicised, to distinguish data from analytical interpretation. This gives teachers voice and helps the reader to understand, and to a degree judge, the fairness of the interpretation. Quotations are adjusted slightly where deemed necessary for the sake of clarity. The transcript number and the line numbers of each quotation are given in parentheses after each quotation, for example ‘(01, 31-32)’. The first number, 01 in this case, refers to the transcript number; the latter numbers, 31-32, refer to the line numbers. This facilitates verifiability. I use the term ‘participant’ to refer to participants in the research.

4.1. Supporting pupils

Project qualification supervision (937) consists essentially in educative conversation (459). Teachers support and help pupils (163), assuming a position of servant (193), by discussing things through with them (54). It is important that the teacher builds or sustains a positive relationship (49). Discussions are educative in nature (91). The conversations support independent pupil engagement (239) and demand teacher intellectual virtue (158), most notably teacher interest (19). Teachers benefit, but only as a by-product (81).

Participants often described supporting pupils in terms of the activities of guiding, directing, and steering (22). *'You are steering them'* (03, 39), as one participant expressed it. The nature of the guidance varies according to pupil ability (4). A history teacher commented that '*I'd calibrate the guidance or the steer differently*' (07, 132) for higher performing pupils. Higher performing pupils may be given more general guidance, leaving plenty of scope for interpretation (2). *'You might want to explore more economic interpretations, and depending on the student, that might be enough'* (07, 129-130). Lower performing pupils, in contrast, may need more specific and concrete guidance (2). *'I might then say, here's three or four different historians that I think you might go and explore'* (07, 131-132).

Teachers need to exercise judgement in relation to the nature and quantity of guidance needed in concrete situations (3). *'I think that's the hard thing, to balance between trying not to direct pupils too much'* (02, 48-49). The challenge for teachers is to balance scope for pupil freedom with educational

meaningfulness (2). Meetings *'just have to be directive enough in order for pupils to be able to go away and do something else'* (04, 21-22).

Teachers can support pupils with an array of activities (18). A Religious Studies teacher participant noted that *'They're researching, they're making a plan, they're making a structure, and you're just giving them advice on that*' (01, 86-87). Support may take the form of verbal advice (33). *'I suggested he went through [his presentation] with his friends so that he felt more comfortable about doing it'* (02, 228-229). Support may also take the form of practical help (3). An English teacher participant reported that *'I have modelled sentences for them, and then they've gone away and gone on to take that modelling and used it in their essays'* (06, 30-31).

Supporting pupils is an altogether different activity from teachers' normal day-to-day activity (85). Supervising is in the main dichotomous from teaching (57), instruction and indoctrination (11), and performing (11), as well as from preparing pupils for examinations (3). One participant characterised day-to-day teaching in the following way: *'Especially when you get Key Stage 4, Key Stage 5, it's very much just having to get through exam content, so it's just standing at the front teaching'* (01, 49-51). Amongst other reasons, supervision is distinguished from such activity because both teachers and pupils participate in it voluntarily (40), because it is pupil led (7), because it involves one-to-one relationships (35), and because it does not involve imparting subject knowledge (4). In relation to the EPQ, one participant said that *'Here we're not giving them any contentual [sic] information*' (01, 85-86).

This finding in particular is context dependent. One participant referred to project qualification provision in a previous school in which she had worked.

‘That school did it very differently to here though. So that was a timetabled lesson where I had 15 students all doing the EPQ and I was supervising all of them and so it was very more the lesson format’ (01, 149-151). Moreover, the finding does not always hold (12). Supervision resembles the teaching of coursework in subjects such as A-level English (6). It resembles independent learning activities such as research tasks and projects in subjects such as Religious Studies (2). Even in such cases, however, project qualification supervision is differentiated by maximal pupil freedom (41) and by a lesser emphasis on measurable outcomes (3).

4.2. Teacher as servant

A significant hallmark of supervision is servitude (193). Teachers serve pupils through self-sacrifice (70), through a return to ‘educational being’ (91), and by following pupils (32). The concept of self-sacrifice explains why teachers personally and voluntarily commit to supervision (19). Supervision *‘speaks volumes of the general commitment of our colleagues to supporting students’* (07, 238-240), said one participant. Another participant said that a pupil *‘was better with somebody who would be [supervising her] for the personal motivation, to have some sort of personal reason for doing it’* (02, 97-98).

The concept of self-sacrifice also explains fittingly why teachers are willing to take on extra work (16) and give up their free time (14), without necessarily gaining anything tangible (14). Supervision adds to teacher workload, although not substantially. *‘I know it's not much extra work if I'm honest’* (01, 35-36). Some participants characterised supervision as an

enjoyable form of work. *'It is a job, not necessarily an unpleasant job'* (03, 65). Supervision is a form of teacher work because one can only engage in it through a school institution (5). *'I wouldn't be doing it outside the role of being a teacher in a school'* (06, 108).

Some participants distinguished sharply between educative and non-educative aspects of supervision. *'I think there are two roles to supervision. I think one of them is the practical pragmatic side that if you like the log book is a framework to'* (04, 27-29). Although this aspect of supervision is laborious work, the educative and conversational aspect of supervision is not always construed as work at all. *'Because the projects are so unique and individual, then frankly that's a kind of pleasure anyway'* (07, 232-233).

In any event, supervision consumes scarce teacher time (14). *'It's another thing that eats into your time, so when you've got so much to do and workload's so heavy, it's another thing that you're taking on'* (02, 75-76). Nevertheless, supervision does not consume inordinate amounts of time (12). *'You have to have a meeting with them which takes up some time. But for the [number] of meetings you have it's not a massive concern'* (01, 206-207). The teacher does not need to invest much time preparing for meetings with pupils (6). *'The time that you spend preparing for it, perhaps isn't that long'* (07, 219-220). Supervision discussions with pupils can be informal, co-incidental, and short in duration, yet still meaningful (2). *'Often it's good if you are by co-incidence teaching them…because you can then hold on to them at the end of lessons…you have to think strategically as when's the best time to meet in order to have meaningful discussions, and often they don't have to be long'* (04,

18-21). The important thing is that teachers give of themselves by making themselves available, which entails dedicating their time to pupils (3).

Teachers are prepared to sacrifice their time to supervise because they are driven by the desire to make a difference to pupils (30). *'You feel like you're making a difference'* (02, 71). Some participants said they are motivated, in small degree, by the desire to help pupils achieve a qualification that facilitates competitive university applications; similarly, some participants saw supervision as a means to prepare pupils for university study (5). *'I know that the students that do it in Year 13 and then go off to university are most definitely well the better served by the fact they've done the project when it comes to university study'* (07, 259-261).

Nevertheless, some participants did not value supervision because of what it helps pupils to achieve. *'I don't think it has to have something at the end'* (03, 107-108). But all participants agreed that supervision is valuable because of what it helps pupils to become. Supervision is a means to develop pupils (14) as well as to both enrich pupils' lives (6) and promote pupil flourishing (15). *'Some pupils don't get an education at home. Some do, some don't. And therefore if we're not helping, some of them will get nothing at all'* (03, 190-191). Sometimes, this concept was couched in overtly moral terms (2). As one participant said, most teachers volunteer to supervise *'probably because they feel morally obliged to'* (03, 179). Overall, therefore, supervision emerged firmly as a way for teacher to return to 'educational being' (39).

4.3. Supervision as education

Supervision is educational not only because it promotes pupil becoming. It is educational because it upholds the joy of intellectual enquiry (10). Participants sometimes spoke of the joy of conversing with pupils about the subject matter. *'The element of supervision that I enjoy the most is when you are just talking about the subject with them'* (04, 30-31). Some participants were adamant that supervision is a form of co-enquiry and co-research that facilitates teacher thinking as much as it does pupil thinking (4). *'I go into the meetings perhaps, certainly with some questions or thoughts…pupils come into those meetings with the same, thoughts and questions…by the end of the meeting, we generated more…[including] some more that neither of us had thought of before that thirty minutes that we spend together'* (07, 210-216). Co-enquiry, like conversations with pupils, is joyful. *'You are genuinely excited about sharing this journey'* (04, 173-174). Because supervision is enquiry, it is also teacher freedom (2). *'It is a space maybe in which you can operate a bit more as an individual'* (06, 118-119).

A core role of supervisor is to facilitate pupil thinking (14). This concept is a complex one. Teachers engage in conversation (54), including questioning (8), with various, often overlapping aims for pupils, for example: to clarify or evaluate pupils' own ideas (4); to broaden their outlook (3); and to encourage discernment and a healthy scepticism in relation to subject matter and sources (2). *'It's getting them to be circumspect, [to understand] that not everything they read might be of equal value. It's about teaching, not to say people's opinions are invalid, it's about making a judgement call of what's the quality'* (04, 89-91).

The concept of facilitating pupil thought is inextricably tied to the concept of the teacher as a follower (32). This concept is encapsulated well in these words: supervisors *'give pupils the freedom to walk, but still bring them back'* (06, 133-134). Following includes making sense of pupils' thinking (4). *'If what they've said to you doesn't quite make sense to you, if they can't explain it to you…You've got to keep pushing them to clarify their thoughts'* (03, 53-55).

Following also includes the concept of 'letting' pupils (2). Letting refers to the idea of pupils being given permission to exercise freedom. *'It's quite nice the idea of allowing them to take control'* (01, 36). This sometimes manifest itself as pupils 'going away', geographically (4) as well as intellectually (2). Some participants spoke of having to chase pupils (16) and to wait for them (2), for example, to arrange meetings. This lack of control is something one participant felt compelled to resist, albeit mildly. *'I wait for them and then if it's way past the deadline, I might give in and email them'* (01, 78-79). Other participants spoke about having to 'rein' pupils back in intellectually (1). *'I might be having to rein in and say you know look at this AO4 [Assessment Objective 4], you've really got to do some more review stuff'* (06, 153-154).

4.4. Supervising as discussing and relating

It is primarily by discussing things through with pupils that teachers serve and educate pupils (54). The main context for discussions is formal meetings (4); another context is informal encounters (5). *'I bumped into one pupil in the dining hall the other day so I asked her how she was getting on'* (01, 72-74). Discussions typically concern the subject matter (6). *'Musing about the topic.*

The musings are important, and those discussions are very meaningful' (04, 26-27). Discussions can, however, concern anything pertaining to the project, such as the presentation evening. *'So we talked about his audience and what they needed to know'* (02, 225).

In discussions, the teacher listens carefully (9), *'Being there for them to use as a sounding board'* (02, 27-28). The teacher also speaks caringly and encouragingly (6). *'I think it's giving them the confidence that their ideas are valid'* (03, 37-38). Teachers attend to pupils' feelings (6), sometimes as the priority. *'The main thing with him was stopping him from being overwhelmed by the thing…because he was anxious about the presentation'* (02, 225-227).

Interrelated challenges for the teacher include: checking pupil understanding (3); pointing things out (8) and 'feeding back' to pupils (6); and retaining scope for pupil judgement by stepping back (3). One participant expressed the latter idea thus: *'Obviously you can't make a judgement for them, about what they ought to be doing'* (02, 35-36). Another participant commented that *'You can see I think when to step back'*. One way supervisors accomplish this is by withholding their own opinion (2). *'I hope I'm not giving them too much of my own opinion because that's a danger as well'* (06, 69-70).

Discussion is only likely to be educationally fertile if it is underpinned by good teacher-pupil relationships (35). *'They have a good relationship and that will help with the supervising'* (01, 141-142), noted one participant. Participants often emphasised the benefits of a pre-existent teacher-pupil relationship. This is precisely why one participant contended that *'It would be nice for teachers to choose who they're going to mentor based on…the student'* (01, 135-136). If there is no such pre-existent relationship, then such a relationship needs to be

built. *'It was about building up a relationship, and you know, he really needed it'* (02, 79-80). At least one participant felt that good relationships are especially important for academically less well performing pupils. *'That's the only reason why [such pupils] are going to come and work after school with you'* (02, 63-64). However, this feeling is discordant with the fact that the participant supervised the highest performing pupil in the Centre in 2017, for whom the relationship dimension was crucial.

Although the teacher-pupil relationship is necessary, other relationships may have a bearing. Supervisors may seek to involve the friends of pupils (1). As mentioned above, one participant said *'I suggested he went through it with his friends so that he felt more comfortable about doing it'* (228-229). Similarly, supervisors may also encourage dialogue between different pupils engaging in separate projects (2). *'Having the two students together and once again they are talking to each other about their ideas'* (03, 325-326). Supervisors will try to include *'other people, if they can support pupils. [A colleague] and I did that between us'* (02, 236). This can include university-based academics in the relevant field. *'Why not drop a line to some of the historians whose books you've read, because they are out there in university somewhere'* (07, 149-151). Finally, supervisors may benefit from relationships with colleagues, particularly other supervisors (2). *'If you get on with your colleagues…you end up talking about things that maybe come up as a result of the EPQ that you are doing, and then that's quite [useful]'* (02, 243-244).

4.5. Independent pupil engagement

Educative conversations and relationships are ones that support independent pupil engagement (90). In completing a project, pupils engage in a variety of activities (54). Such engagement is framed by pupil freedom (41), presses pupils to make-meaning (39), and develops pupils (15).

Pupils engage expressively (16). They express themselves in writing and especially by presenting their thoughts to an audience (15). *'I think the presentation evening is such an important thing to them. I can see it's a real milestone'* (06, 210-211). Pupil presentations are an opportunity for celebration and recognition. *'Parents can come and look at it when they do their presentation, all of those things are about taking pride in your work, and you know, everyone wants to show their mum what they've done'* (03, 2015-217).

Pupils also engage creatively (11). They (i) work to produce (6), (ii) generate ideas (2), and (iii) essay (verb) (2). One participant spoke of 'essaying', *'the conception and the execution of the essay'* (06, 182-183), for instance.

What pupils express, and what undergirds creative engagement, is understanding (9). Understanding includes but exceeds knowledge. For example, it is complex: *'Pupils are actually trying to understand it in a way that's multi-layered'* (04, 74-75). It is also comprehensive: *'They are understanding something in a more comprehensive way'* (04, 43). Pupils' understanding encompasses the subject matter (4), different perspectives towards it (2), and advice relating to the intellectual pursuit of it (1).

Understanding is acquired by researching (6), questioning (3), and self-teaching (1). These processes, although conducted in an organised fashion (8), are inherently unstable (5). *'Learning is messy'* (07, 192); *'students need to see that'* (07, 189). *'That's the joy of academic research actually, that you never know what you are going to find…it's interpretation of the facts'* (04, 49-51). The project therefore dialectically creates space for and demands pupil meaning-making.

Pupil meaning-making (39) includes pupils experiencing feelings about themselves as learners and about the instability of learning. Some of these feelings are negative, such as feelings of anxiety (3), fright (2), and uncertainty (5). *'You're permanently revisiting and perhaps challenging some of their earlier assumptions or their expectations…it's quite frightening for them, because I think they come sometimes with a fixed mind-set of how the essay's going to pan out'* (04, 35-38). Other feelings are positive (8), especially enthusiasm for learning. *'Once you lose that enthusiasm, you lose the meaningful enrichment'* (03, 112-113).

The concept of pupil meaning-making is richer than merely experiencing feelings. It includes a pronounced interpretive element: broadening outlook (4), engaging with different perspectives (2), and taking a perspective (5). *'I think if you're encouraging them to see a much broader picture, that's fantastic'* (04, 66-67). This explains the feelings of one of the mathematics teacher participants: *'The maths [projects] that I've seen historically haven't been particularly good. I don't think [mathematics] lends itself in many ways to doing this'* (03, 133-134). For interpretation demands uncertainty (2).

Interpretation also requires pupil freedom (41). Project participation is emancipatory for teachers and pupils (2). *'We are all on a journey of emancipation from our own cultural baggage and preconceptions, and I guess the students are as well'* (06, 198-200). Pupils volunteer to participate and are free to decide what and how they investigate (21). *'Pupils are in control of their learning. They can pick what they want to do'* (01, 27-28). Pupils work independently (9), away from the teacher (4), and therefore need commitment to (1), and assume responsibility for (7), their learning. *'The purpose of the project is for pupils to take responsibility'* (01, 24). This is conducive to the development of pupils (15). Pupils develop educationally (7). *'Projects are essential if you're going to develop a more rounded child'* (03, 09). Pupils also develop self-efficacy (2) and develop as researchers (4). Pupils *'learn the skills of being organised and prioritising work themselves'* (01, 25). One participant contrasted the project qualification based approach to developing pupil independence with the school's typical instructional approach. *'We might tell pupils how to be independent, but [we're] not actually doing anything to make them be independent…[supervising pupils] is actually doing what you are trying to'* (03, 29-31).

4.6. Teacher intellectual virtue

Educative conversation that facilitates independent pupil engagement is dependent on teacher intellectual virtue (158). Teacher intellectual virtue

comprises teacher knowledge (116), teacher interest (19), and teacher self-efficacy[4] (5).

There was little consensus relating to whether the teacher needed expertise in the subject matter of the project (79). Some participants felt confident that they could supervise well pupils engaged in the study of a subject of which they had no knowledge, and reported instances of this. For example, a participant recalled that he was asked to supervise a pupil engaging in a project about cancer treatment. *'I know nothing about cancer treatments'* (07, 161). But *'that's exactly the point of the EPQ because actually in a way it's the questions you will ask, sometimes not knowing the topic, that will help the student chart their path.*' (07, 164-165). Other participants regarded subject knowledge as essential. One scientist contended that *'I couldn't do it if I wasn't a scientist, I wouldn't have the confidence in mentoring anybody who wasn't doing something scientific*' (05, 85-86). Another participant articulated both views. *'I think there are certainly some scientific EPQs that you don't have to be a scientist to, I would argue fiercely, supervise, but I think sometimes if the area is so complicated it helps if you have an academic understanding of that area'* (04, 109-111). This lack of consensus also applies to the technical knowledge of a teacher supervising a pupil through a project involving the production of an artefact (1) *'because sometimes they need technical advice as to how to achieve things'* (04, 126).

What is clear is that the teacher needs some broad, relevant subject knowledge. Often, the general knowledge of the teacher, acquired from

[4] By which I meant something like 'the ability to have an effect on oneself', a definition that is distinct from the original technical one.

activities and sources such as watching documentaries, reading books, life experience, previous career work, staying abreast of current affairs, and familiarity with their own children's university work, can suffice (22). One participant said that *'Something else that's has really helped me, outside of being an English teacher, is what…my own children have done in science. My daughter did a human science degree at UCL and that was really, really instructive*' (06, 55-57). Similarly, sometimes generic essay writing skills, acquired through graduate university study, can suffice to support a pupil engaged in an essay-focused project (1). *'If you're skilled at writing long essays then the student's got to benefit from that'* (04, 139-140). Some participants reported conducting some basic research into the subject matter of a pupil's project to acquire subject knowledge. *'Maybe as a result of what pupils are telling you, you do a little bit of research yourself, just so that you can support them in the decisions that they are making'* (02, 118-119).

What emerged as a more significant factor in teacher intellectual virtue is teacher interest (19). The teacher needs to be interested in either the subject matter or the pupil's education, although these two interests were largely coterminous and sometimes indistinguishable. Pupils need to *'feel that you've really invested in their project…that it matters to you…that it's not just something that's tagged on, and it's not just something that you've been press-ganged into, that you actually really do want to do this*' (04, 169-172).

A necessary condition of teacher intellectual virtue is knowledge of the supervision process itself (11). Teachers need to *'feel confident knowing what it's about, how you do your sessions…and how to supervise'* (01, 181-182). The centre co-ordinator has a key role to play in this regard (4). *'The guidance*

you [centre co-ordinator] provide is crystal clear…when a student…makes an appointment…I'm then going back to your…notes. That's *where we are on the journey; I've got to make sure that I'm checking on* these *points'* (07, 247-250).

The least significant dimension of teacher intellectual virtue is teacher self-efficacy. Teacher self-efficacy includes being organised, independent, approachable, rounded, and accepting, amongst other things. Pupils need to have *'confidence in your being reliable, being welcoming, embracing their ideas'* (06, 131-132).

4.7. Teacher gains

Supervising a pupil through project qualification may benefit teachers (81). Teacher gain takes three main forms: (i) development as an individual teacher (61); (ii) the improvement of the relationships of the teacher (17); and (iii) the cultivation of the learning environment in which the teacher works (3).

Teachers do not engage in project qualification because it benefits them. *'I don't believe for a moment that any colleague is doing it because they think, oh, I'll get some gained time back, or time off in lieu'* (07, 250-251). Indeed, most participants believed that supervision has little extrinsic benefit for teachers. *'I don't think it impacts too much on their job'* (01, 203-204). *'Whether it would help me to be able to teach any better or build up a relationship any better, I don't really think I got anything out of it in that respect'* (02, 71-73).

Nevertheless, supervision does develop the teacher, principally by enhancing his or her knowledge (42). Teachers engage in active learning in

relation to project subject matter (21). One participant said, *'You can't help but dig a little bit deeper yourself'* (02, 123-124). Teachers may also learn more passively; indeed, one teacher spoke about being taught by the supervisee. *'He taught me far more about the Middle East really than I knew…he was directing me to, have you seen this, have you heard of this person. No, there were key people in Iraq whose names I didn't know. And his knowledge was such that I was sitting at his feet, it wasn't the other way round'* (04, 118-121). Such knowledge contributes to teachers' education but may be insignificant or irrelevant to teacher practice (3).

Supervision also helps teachers to learn a little about pupils (6). Teachers learn about pupil motivation. *'You learn a bit from them in terms of what they, what makes them tick'* (03, 143). Teachers also learn about pupils' exercise of intellectual freedom. *'Seeing how they develop their ideas, it's quite an interesting process'* (03, 21).

Supervision helps teachers to learn about how to teach research, especially if they are responsible for facilitating research in another context in the school (6). *'Working with the EPQers [pupil participants in the EPQ] highlights some of the areas that need addressing and strengthening in terms of students being able to conduct research profitably'* (06, 25-26).

Teachers may develop through supervision because it presses them to broaden their outlook (9). *'It challenges us to think differently about how we're supporting students'* (07, 96-97). This concept was often expressed in terms of taking a less parochial, subject-centred view. One participant commented that *'For me as a maths teacher, you're quite narrow in your focus'* (03, 22). Speaking about this mathematics teacher, another participant added that he *'felt*

he was breaking the mould, meaning the mould of his teaching and the way that he explains things in the classroom' (04, 105-106).

In addition to teacher self-development, supervision may also create or strengthen teacher relationships which benefit them in the future (17). Such relationships can be built with pupils (10). *'You might also benefit from it two years down the road, when you do actually start teaching the child, and she knows you'* (03, 154-155). However, two participants judged that this benefit may be diminished by the fact that, given that pupils participate in the project voluntarily, future relationships are likely to be positive regardless. *'The ones that are doing it are probably not ones that you would have a weak relationship with'* (03, 144-145) because *'it's a self-selecting group'* (07, 266).

Teachers may also, through project supervision, sustain profitable positive relationships with colleagues (7), though this might be highly contingent on context. '*It's kind of teamwork, I suppose…[but] it's probably a bit unique over here, but yes, it's got the potential to do that'* (02, 239-243).

The final, but least salient, benefit of project qualification is the cultivation of a thriving learning environment (3). *'Just the intellectual buzz as you are going around that building on the night'* (06, 212-213).

Chapter 5: Implications

This chapter discusses the implications of the findings. The first section concerns the implications for theory relating to teacher development. In the next section, I consider the implications for knowledge of the project qualifications and their supervision. The third section clarifies the limitations of my study. Extending this, the fourth section isolates some fertile areas for further research. I end by offering some brief reflections.

5.1. Teacher learning as a by-product of teacher-pupil work

My grounded theory confirms many aspects of the work-based learning theory of Eraut (2007). The professional teacher does indeed learn about clients – pupils – as a by-product of working with them (Eraut, 2007, pp. 409-412). This learning encompasses *learning about clients* themselves, one of Eraut's (2007, p. 411) three categories of learning. *Learning about pupils* (6) emerged as a distinct concept from the data I gathered. The learning also encompasses Eraut's (2007, pp. 411-412) other two categories of learning, although less expressly. The first of these categories is *learning from novel aspects of each client's problem or request*. This resonates with my category *engaging in learning* (21), and is exemplified well by the participant comment: *'You can't help but dig a little bit deeper yourself'* (02, 123-124). The other Eraut category is *learning from any new ideas that emerge from the encounter*. This category is consonant with the concept of *supervision as co-enquiry* (4) in my findings, and it reverberates with the more abstract category *developing knowledge* (42).

Furthermore, my grounded theory confirms another aspect of Eraut's thinking. One key category in Eraut's theory is *learning activities located within work processes*. This category includes *asking questions*, *getting information*, *listening*, and *giving feedback*, which map seamlessly onto my concepts of *questioning* (8), *researching* (10), *listening* (9), and '*feeding back*' (6). My grounded theory suggests, but does not quite show, that all of these activities, located in teacher-pupil work, lead to the development of teacher knowledge (42). What is noteworthy here is that teachers learn from engaging in these activities through work with pupils, not only with colleagues, a fact implied by, but not altogether clear in, Eraut's work (2007).

Although my findings confirm Eraut's theory, they also suggest that it needs to be refined, at least in the professional context of education:

1. The concept of *working* may not be precise. The category *teacher working* (11) and the concept *increasing workload* (16) explained much of the data, but not as much as the more abstract category of *servitude* (193). Therefore, the term 'serving'[5] may be preferable to the term 'working'.
2. Eraut's category *learning activities located within work processes* is not sufficiently analysed. My research identified general activities such as guiding (22) and helping (18) and more specific activities such as modelling (3) and checking (3) as candidate concepts for this category.
3. Likewise, Eraut's (2007, pp. 411-412) implicit distinction between learning *about* and learning *from* is not exhaustive. At least one new

[5] Or 'ministering'.

category is needed, namely, learning *with*. This category emanates from my concept of co-enquiry (4).

4. It is imprecise to limit 'learning about' to *learning about pupils*. For teachers can learn about many things from teacher-pupil work, especially subject matter (7). Similarly, it is imprecise to limit 'learning from' to learning from novel aspects and new ideas that arise. Teachers can learn from many sources, including pupils. As one participant said of a former supervisee, *'He taught me far more about the Middle East really than I knew'* (04, 118).
5. Learning is not the only developmental by-product of teacher-pupil work; or, at the very least, the term 'learning' does not adequately capture these by-products. For instance, teacher-pupil work can *broaden teacher outlook* (9). Therefore, the concept *teacher self-development* (61) may be more precise.
6. Eraut's (2007) theory does not attend substantively to the axiological; my findings suggest that teacher learning and development through teacher-pupil work is not significant for experienced teachers.

5.2. The project qualifications and supervision

The grounded theory of teacher project qualification supervision is, so far as I am cognisant, the first attempt to understand the nature of supervision. It is difficult to separate the process of teacher supervision from the object of that supervision, and thus *pupil independent engagement* (239) emerged as a major category.

A study of the EPQ pilot (Daly & de Moira, 2010) found that the EPQ fosters intrinsic pupil motivation and pupil creativity. The concepts *pupils taking responsibility* (7) and *creative pupil engagement* (11) are consonant with this finding. Daly and de Moira (2010) also found that the quality of pupil independent engagement in the project is not contingent on prior pupil attainment. My findings do not necessarily contradict this, but suggest that the nature of supervisor support may differ according to prior pupil attainment. Pupil commitment appears to be the crucial factor. Further investigation is warranted.

The most detailed published empirical study (Stoten, 2013) of the project qualifications was conducted in the context of two sixth form colleges in which the EPQ was supervised through timetabled lessons. The study did not treat of the FPQ or the HPQ. Its key finding was that the EPQ

> is a possible vehicle to promote independent learning [and that it] negates some of the more negative aspects associated with classroom-based learning. (Stoten, 2013, p. 66)

The first element of this finding, that the EPQ promotes independent learning, is substantiated by my own findings. *Independent pupil engagement* emerged as a major category (239). This subsumes Stoten's concept and adds new dimensions to it. Pupil participation in the EPQ, for instance, also involves *expressing understanding* (16) and *generating ideas* (2).

My findings also substantiate the second element. Participants bemoaned, for instance, the narrowing of the curriculum. '*We've got at the moment a curriculum which is quite narrow and with the introduction of Progress 8 and Attainment 8 the drive from the government is pushing schools to narrow the curriculum further*' (03, 10-12). The concept of *pupil freedom* (41),

which is commensurate with Stoten's (2013, p. 74) concept of *student sovereignty*, is a partial corrective to this. My findings saturate Stoten's notion of negating the negative by adding the category *being educators* (91), a category that encompasses and exceeds (i) developing pupil self-regulation, (ii) promoting pupil enjoyment, (iii) preparing pupils for university, and (iv) challenging a culture of 'spoonfeeding' (Stoten, 2013, p. 73).

Another of Stoten's (2013, pp. 73-74) findings was that the training of supervisors is important. This is confirmed by my finding that teachers need *knowledge of supervising* (11). Additionally, it can now be stated that the centre co-ordinator is potentially crucial in facilitating or imparting such knowledge.

Stoten (2013) discusses school arrangements for supervision. He notes that examination boards advise against matching supervisor expertise to pupils' topics (p. 74). He proceeds to speculate that

> some institutions do try to match expertise to topic to maximise their students' achievement and it is a practice that competition and league tables do tend to encourage. (Stoten, 2013, p. 74)

No evidence is adduced to corroborate these claims. My own evidence suggests that there may be educational, as opposed to performative, benefits from matching supervisor expertise to pupil topic. Therefore, awarding bodies may be ill-advised to discourage this practice

The theory adds weight to the recommendation of Yeoman et al. (2017, p. 300) that pupil project qualification participation should be encouraged in Key Stages 4 and 5. For such participation promotes the engagement (54), freedom (41), and development of pupils (15). However, the theory suggests that Key

Stage 3 pupils could also benefit from participation in a project qualification, perhaps more so than older or higher performing peers.

The theory also supports Yeoman et al.'s (2017, p. 300) recommendation that supervisors benefit from an academic background in research. This is evidenced by the category *supervisor subject knowledge* (79). However, a research background is not a necessary facet of effective supervision. Other sources and forms of knowing, such as technical knowledge of production methods, may be at least as important. It appears that the type of knowledge that the supervisor needs varies greatly. One participant expressed this sentiment eloquently: *'There are so many sets of x and y, aren't there. There are so many variables that you are bringing into the equation'* (06, 165-166).

In the context of their article on pupils' experiences of research, Yeoman et al. (2017, p. 292) writes that a key marker of the EPQ is that pupils set their own their research question. They then describe the EPQ as

> A dissertation or investigation/field study, which involves formulating and then addressing a research question through either a literature review and argued discussion or data collection and analysis. (Yeoman et al., 2017, p. 292)

However, my research suggests that this characterisation is at best imprecise. The conceptual hallmark of the project qualifications is *independent pupil engagement* (239). Setting a research question is but one element of the sub-category, *pupil freedom* (41). At worst, the characterisation is a superimposition of the vocabulary of university-based researchers onto a school and college practice. No participant in the study used the words 'dissertation', 'field study', 'research questions', 'literature review', and 'data collection', and these

concepts did not emerge from the data. What emerged were more mundane concepts such as *filling in forms* (6).

5.3. Limitations of the study

The research study has limitations. The main limitation is that the findings are context-dependent and therefore may not apply in other contexts. This limitation where most salient is flagged in the findings section itself. The study school, Hilltop, is a comprehensive school. Some local schools, in contrast, are selective. *'In a grammar school, it's just, you know, a pushover'* (06, 241-242). Similarly, at Hilltop, no curriculum time is apportioned to project qualification supervision. At other schools, however, supervision occurs in the context of taught lessons. *'I had 15 students all doing the EPQ and I was supervising all of them…it was very much the lesson format'* (01, 150-151). Finally, at Hilltop school, participation by pupils and teachers in the project qualification is entirely voluntary. But, *'it would be interesting to explore what would happen if…it [pupil participation] wasn't self-selecting'* (07, 267-268).

This limitation is exacerbated by the nature and size of the sample. Each of the seven participants were amongst the most accomplished and committed practitioners in the school and therefore they are not necessarily representative. Generalisation from such a sample is therefore difficult to warrant (Lewis & Ritchie, 2003). At any rate, the theory of project qualification is grounded specifically in teacher perspectives. It therefore excludes other relevant perspectives, most notably, the perspectives of pupils. Theories grounded in multiple perspective are likely to be richer (Zartler, 2010).

Another limitation is that the research focuses on the project qualifications – the Foundation, Higher, and Extended Project Qualifications – as a single entity. Occasionally, there were signals in the data that there *could* be heterogeneities. *'The big [thing] for me is…less to do with the EPQ or the HPQ, more to do with the FPQ'* (03, 199-200). Although differences between the qualifications did not emerge beyond this, this may be because they were not ferreted out. Indeed, only one of the participants had experience of FPQ supervision.

5.4. Recommendations for further research

The limitations of the research give rise to two main recommendations for further research. Firstly, there is a need for research into project qualification supervision in other contexts such as schools in which pupil and teacher project participation is compulsory, or in which supervision occurs through timetabled curriculum lessons, or in a school with significantly different characteristics, such as selective schools. This would establish the external validity of the present study. Secondly, much scope exists for research into project qualification supervision and its relationship to teacher development in a similar school context. Such research could include a wider sample of teachers. The sample could also include pupils who have experienced supervision by undergoing it. Research of this kind would be useful in verifying, or falsifying, my own research's internal validity. Regardless of context, sensitivity to potential differences between the FPQ, HPQ, and EPQ could yield new insights.

This study focused on a particular manifestation of the concept of learning as a by-product of working with clients. There is ample scope for investigation into other forms of teacher-pupil work to establish the extent to which, if any, different types of this work engender teacher development. More ambitiously, an investigation that seeks to identifies synergies and discords in teacher development and learning between multiple forms of teacher work with pupils could yield yet further insights.

5.5. Some final thoughts

I will end by sketching out some reflections and projections. Firstly, I want to share my thoughts on the project qualification. The data that I gathered touched on much more than my interpretation of that data conveys. Participants at times painted a rather bleak portrait of the current state of education in England: the curriculum is too narrow, teacher workload is excessive, and too much teacher activity is meaningless.

What surprised me, however, is how participants characterised the project qualification as, in the words of Paulo Freire, a pedagogy of the oppressed, of hope, and of freedom. One participant explicitly described the process emancipatory for both pupil and teacher. I have now arrived at the understanding that project supervision is, or at least can be, the exercise of what Hedges (2015) calls the ‘moral imperative to revolt’. One of my colleagues said that supervision is *‘not about trying to get them to think a particular line’* (04, 69-70); by implication, it is resistance against all that is indoctrinatory in current schooling. It provides a concrete answer to Huttunen’s (2017) question,

‘How do we acknowledge indoctrinative teaching?’ There is, I suspect, room to reconceptualise, and strengthen, the project qualification as an embodiment of critical pedagogy.

This gives rise to some thoughts on teacher development. Before embarking on the research, I had not read any of the vast literature relating to professional development. I was disappointed with the low quality of much of the work that I encountered. Respected institutions were making claims about ‘the evidence’ that were patently rash generalisations. Leading scholars were often unable to give adequate, let alone robust, definitions of the basic concepts. The work of Michael Eraut stood out as singularly rigorous; his corpus merits more attention than it has hitherto been given. Eraut’s key insight is that a culture of collaboration and dialogue is a sine qua non of professional and hence teacher development. However, beyond striving to create and strengthen such a culture, his work does not shed much practical light on what schools ought to do in the concrete, including in relation to teacher development.

Ultimately, my own research does little to resolve the aporia of teacher development identified in section 2.5, given the finding that teacher development is an *insignificant* by-product of teacher-pupil work. But it does intimate that the aporia can be rethought through the lens of critical pedagogy, human freedom, and the moral imperative to revolt. Let me explain.

The bleak portrait of schooling painted by participants is suggestive of a dysfunctionality of the educational system largely engineered by the state. For instance, one participant held the government responsible for a restrictive school curriculum. Likewise, Stoten (2013) raises concerns about league tables and school competition, neo-liberal strands of the education system.

The dysfunctionality is exemplified well by Ofsted, one arm of the state. Independent evidence suggest that Ofsted causes more harm than good (Coffield, 2017). My own study supports such an assessment. For example, Ofsted (2017) draws an implicit causal link between 'highly quality professional development' and 'highly effective teaching' (p. 13). But the best evidence available suggests that this is impossible, as I showed in section 1.1. Even if it were possible, it is difficult to conceive how Ofsted could validly judge the existence of the causal link, given their remit. Yet Ofsted presume that they can.

The fundamental problem is therefore *systemic*: It concerns the education system itself. Hedges writes:

> We accept the system handed to us and seek to find a comfortable place within it. We retreat into the narrow, confined ghettos created for and shut our eyes to the deadly superstructure of the corporate state. (Hedges, 2009)

Teachers and school leaders are acquiescent. Teacher development itself can be symptomatic of this. *'You can go to a CPD session, just because you are going to tick a box, that's fine'* (02, 292-293). Yet there is no reason why teachers need to acquiesce and unconsciously regard themselves as victims swept along by the waves of performativity, neo-liberalism, and state diktat. They ought not to acquiesce; on the contrary, if Hedges is right, they have a moral duty to rebel. Rather than accepting the system, teachers ought to challenge it, as an act of human liberation, emancipation, and freedom. The very concept of teacher development, therefore, needs thoroughgoing reassessment in the light of this imperative.

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Appendices

Appendix 1: Example interview guide

Interview Number:	01
Interviewer:	J Stone
Interviewee:	Humanities teacher 1 [pseudonym]
Location:	Hilltop school [pseudonym], office X2a
Time:	11:00 to 11:30
Date:	[DATE]

Stage 1: Arrival

Shake hands with interviewee; thank interviewee for attending. Invite interview to take seat. Offer light refreshments.

Engage in brief, pleasant conversation unrelated to the research e.g. about how the interviewee's house move is proceeding.

Stage 2: Introducing the research

Set out the nature and purpose of the research.

Reiterate interview arrangements e.g. duration, audio recording.

Articulate the ethical entitlements of the participant; ask interviewee for written consent before continuing.

Stage 3: Beginning the interview

Once the interviewee has granted consent, record the conversation using a digital voice recorder (Olympus DS-50). Make sure that two spare AAA batteries and another digital voice recorder are available in case of malfunction.

There is no need to gather and record contextual information because, as a colleague and the leader of the project qualifications, I am already conversant with the context.

[The formal interview will begin with a relatively easy open-ended question in order to set the interviewee at ease:]

Stage 4: During the interview

Provisional questions and topics, for flexible use

What if anything do you like about supervising pupils through the project? What do you dislike?

What, if anything, have you gained from supervision? And what, if anything has supervision costed you?

Why did you volunteer to engage in project qualification supervision?

What do you think makes a good project qualification supervisor?

How do you make sure that you supervise your student[s] well?

How far is project qualification like day-to-day classroom teaching?

Do you think it is true that it's the project qualification supervisor can make little difference to how well students do? Why? Why not?

Should all teachers be compelled to supervise at least one student through the project?

Would you advise a colleague to engage in EPQ/HPQ/FPQ supervision?

To what extent, if any, do you think students need to be supervised by a teacher, as opposed to, say, a teaching assistant or graduate?

Is the teacher's subject knowledge significant in effective project qualification?

Stage 5: Ending the interview

About 5 to 10 minutes before interview end, indicate that interview is ending e.g. by using the phrase 'in the last few minutes of the interview' or similar phrase.

In the last minutes of the interview, ask interviewee if they have any questions or anything further they would like to add.

Stage 6: After the interview

Thank the interviewee for participating.

If appropriate, discuss arrangements for follow-up interview.

Clarify that the interview will be transcribed and that the interview will be sent a copy.

Make clear that the participant will be invited to check analysis; checking is optional.

Outline arrangements for dissemination including feedback session on Tue 24 Apr 18.

Appendix 2: Transcription conventions

Adapted from Torrance and Pryor (1998, pp. 171)

(*)	inaudible (probably one word)
(**)	inaudible phrase
(***)	longer inaudible passage (e.g. sentence)
(*hello)	inaudible word, ‘Hello’ suggested by transcriber
-	short pause
disapp\	incomplete word
<u>these</u>	word emphasised
COME	word said loudly compared to other utterances of this speaker
=	rapid change of turn of speakers (used at the end of utterance and beginning of next utterance)
%John%	pseudonym
>it's mine<	simultaneous speech
Italics	non-textual material (transcriber’s commentary)
~	rising intonation, slowing (invitation to other speaker to complete sentence)
09:42	time reading from digital audio file
…[ ]…	duration of transcript omitted – extraneous material (e.g. interruption not relevant to point under discussion)
…[X]…	duration of transcript excluded or redacted for ethical reasons
102	transcript line number
JS	interviewer, Jed Stone
INT	interviewee
Transcript 01	Transcript number

Appendix 3: Example transcript

Transcript 01 – Teacher of Religious Studies

Interview location: X2a, on school site

Interview date: Friday 15 December 2017

JS [00:03]: ...[]…Just a few questions for you. How do you feel that your project qualification supervision is going?

INT [00:13]: Okay, I don't see them as much as I thought I would. - So actually I haven't had to do as much as I thought I would for it, but I assume it's going okay, >every time I've spoken to them.< =

JS [00:25]: = >So what do you have to do<, or what have you done?

INT [00:28]: So, I've read their project proposals, so I've sat and listened to them and what they're planning to do, guided them on their project proposals, read them, gave them verbal feedback and filled in the logbook. Seeing how far they are getting on, give them some advice.

JS [00:45]: And do you feel they are doing okay?

INT [00:47]: Yes they seem to be doing okay. I've got two very conscientious girls to be fair, and yeah they're just getting things done.

Appendix 4: Example analytic memo (text only)

From first four nodes, clear that project supervision involves infrequent contact with pupils and therefore not too much work involved. Pupil progress monitored/tracked/ascertained mainly through conversations.

'Progressing' - is language that I'm using and perhaps imposing - be careful.

Check audio: the chase should presumable read 'the chase'

Pupils shouldn't be chased because they need to learn organisational skills themselves

"it's quite nice the idea of allowing them to take control and giving them that opportunity to thrive **for** themselves." Perhaps suggests that *normally* pupils thrive because of teachers.

The teacher in this interview seems to feel that she needs to be chasing pupils - and perhaps feels guilt for not doing this where necessary because this is a typical part of her normal practice.

Teacher has sometimes helped pupils to organise themselves e.g. by reminding them of deadlines and of what they still need to do.

Supervising does not require subject knowledge – nor good subject knowledge

Language:
Teacher, supervisor
Pupil, student [learner]

A few coding errors - not quite highlighting the whole phrase e.g 'go off and research'

The language of going off is recurrent. It suggests that independence is somehow related to the geography of learning - ie.g. when teachers are not in the **vicinity** of the teacher. Quite what vicinity means has scope for further investigation. Relation to 'contact with pupils', which has appeared in a few codes.

The interviewee claims that for supervision to be successful, at least one of the following conditions need to met: joint interest in the topic, or a positive relationship. Presumably, the ideal is both a joint interest and a positiev relationship. Implication is not necessarily that the relationship needs to be pre-formed, though that might be a suggestion. There is no implication here that the supervisor must be expert in the area - just interested.

Missed a code for pupil work EPQ - so go back and find it

Distinction between staff wants and what staff feel would benefit them - in light of developmental needs. My questioning here may have been leading - so careful!

Appendix 5: Invitation email

[DATE]

Dear [PARTICIPANT INVITE]

I am researching project qualification supervision. The research concerns the link, if there is one, between teacher learning and project qualification supervision.

I wondered whether you would be willing to participate in the research. I'd like to interview you for up to thirty minutes to ask you about your perspectives on these things.

I'm endeavouring to make sure that the research is ethical. Further details, the ethical small-print, are attached herewith.

If you'd prefer not to participate, that is of course fine. If you'd like further information, then please let me know. If you are happy to be interviewed, then please reply to this email and we can fix a mutually convenient time.

Many thanks in advance.

Yours sincerely

Jed

Appendix 6: Text attached to invitation email

Research Project into Teacher Development and Project Qualification Supervision

I am researching project qualification supervision. The research concerns the link, if there is one, between teacher development and project qualification supervision.

Participation in the research is voluntary, and if you'd prefer not to participate, that's fine. If at any time you would like to withdraw from the interview and research process, then you can do so without needing to give a reason. Similarly, if there are questions that you'd prefer not to answer, please indicate, and that's not a problem.

If you choose to participate, then that choice will facilitate the research project: thank you, your contribution will be appreciated. I'll record the interview using a digital voice recorder. The interview discussion will be transcribed and you'll be sent a copy of the transcript. You'll also be sent a copy of the interpretation and analysis at some time during the research, which you will be invited to check, though there's no compulsion on you to do so.

Your responses will be treated confidentially, unless there is a need for disclosure in accordance with school policy, for example, in relation to child protection.

You may be quoted in the final report to illustrate themes and ideas. If so, then your name will be anonymised to protect your identity, though you will be afforded the opportunity to be identified with your comments in the final report where appropriate. That being the case, you'll need to give your written consent for this.

It may be necessary to share the audio-recording and transcript with others. If this proves to be the case, then those accessing the recording and/or transcript will be asked to sign a binding non-disclosure agreement. I will redact recordings and transcripts if necessary to protect your identity.

The interview is likely to last up to 30 minutes; if more time is needed, then we can agree to continue, if convenient; or we can arrange another interview, if you are happy to do so.

I will send you a copy of the outcomes of the research project in due course, and I will be leading a twilight CPD session in Room W2 on Tue 24 Apr 2018, starting at 15:30 and lasting approximately one hour. The session is titled 'Teacher learning and development: Insights from the research literature and school-based research'.

Many thanks in advance for your consideration.

Jed

Appendix 7: Consent text and form

Research into Teacher Development and Project Qualification Supervision

I am researching project qualification supervision. The research concerns the link, if there is one, between teacher development and project qualification supervision.

Participation in the research is voluntary, and if you'd prefer not to participate, that's fine. If at any time you would like to withdraw from the interview or research, then you can do so without needing to give a reason. Similarly, if there are questions that you'd prefer not to answer, please indicate, and that's not a problem.

If you choose to participate, then that choice facilitates the research: thank you. I'll record the interview using a digital voice recorder. The interview discussion will be transcribed and you'll be sent a copy of the transcript. You'll also be sent a copy of the analysis of your interview at some time during the research process, which you will be invited to check, though there's no compulsion on you to do so.

Your responses will be treated confidentially, unless there is a need for disclosure in accordance with school policy, for example, in relation to child protection.

You may be quoted in the final report to illustrate themes and ideas. If so, then your name will be anonymised to protect your identity, though you will be afforded the opportunity to be identified with your comments in the final report where appropriate. You'll need to give your written consent for this.

It may be necessary to share the audio-recording and transcript with others. If this proves to be the case, then those accessing the recording and/or transcript will be asked to sign a binding non-disclosure agreement. I will redact recordings and transcripts if necessary to protect your identity.

The interview is likely to last at least five minutes and up to 30 minutes. If more time is needed, then we can agree to continue, if that is convenient to you; or we can arrange another interview, if you are happy to do so.

I will send you a copy of the outcomes of the research project, and I will be leading a twilight CPD session in Room W2 on Tue 24 Apr 2018, starting at 15:30 and lasting approximately one hour. The session is titled 'Teacher learning and development: Insights from the research literature and school-based research'.

Written consent to participate

I understand what participation in the *Teacher Development and Project Qualification Supervision Research Project* entails, and I am happy to participate voluntarily.

Name: _____

Signature: _____

Date: _____

Appendix 8: Non-disclosure agreement

Non-Disclosure Agreement

Project title:	Teacher Development and Project Qualification Supervision Research Project
Project leader:	Jed Stone (Leading Practitioner)
Project team:	Jed Stone (Leading Practitioner)

Brief Description: A grounded theory approach involving semi-structured interviews of teachers involved in project qualification supervision. Interviews were recorded using a digital voice recorder device, and then transcribed. Transcript text was then subjected to analysis including analytic memos, coding, categorising, and the identification of core categories. The analytical interpretation is articulated in a final report.

This agreement, dated [DATE], is between (1) Jed Stone of [SCHOOL NAME] and (2) the [NAME OF VERIFIER] ('the verifier').

1. Background

1.1. Jed Stone owns and controls proprietary data (the 'data') in relation to the Teacher Development and Project Qualification Supervision Research Project.

1.2. Jed Stone considers the data to be strictly confidential.

1.3. Jed Stone proposes to disclose this confidential data to the verifier, in connection with the verifier's role in quality assuring the project.

This agreement's purpose is to set forth the terms under which (1) Jed Stone will disclose confidential information to the verifier and (2) the verifier will keep this information confidential.

2. Agreement

2.1 The verifier will treat of the data in strict confidence. This includes, but is not limited to, not disclosing the data, or interpretations of the data, with teachers, learners, school leaders, school governors, media organisations, inspectors, visitors, friends, family members, the public, or those who work in Higher Education Institutions.

2.2. The verifier is authorised to access the data and to use it for the sole purpose of verification.

2.3. The verifier will exercise all reasonable care to protect the confidentiality of the data. This includes storing electronic forms of the data on a device with 128-bit Advanced Encryption Standard or higher encryption.

2.4. If the data gives rise to any concerns from the verifier, for example, relating to the safety or well-being of respondents, then the verifier will notify Jed Stone at the earliest reasonable opportunity.

2.5. If the student receives a request for disclosure from any other party, then the verifier will promptly notify j Stone.

2.6. The student will securely destroy the data within twenty four hours after verification.

2.7. The data disclosed to the verifier remains the property of Jed Stone.

3. General Provisions

3.1. This is the only agreement of the parties respecting this subject, and it supersedes any prior written or oral agreements between the parties regarding this subject.

3.2. The parties may not amend this agreement except in writing, dated after the date of this agreement and signed by each party or each party's representative.

Signed: _____

Print name: [VERIFIER NAME]

Date: [DATE]

Signed: _____

Print name: Jed Stone

Title: Leading Practitioner

Date: [DATE]

Appendix 9: Consent slip for identification

I wish to be identified with the quotation(s) below in the reports relating to the *Teacher Development and Project Qualification Supervision Research Project*:

[QUOTATION(S) HERE]

Name: _____

Signature: _____

Date: _____

Appendix 10: Written consent to use excerpt from transcript

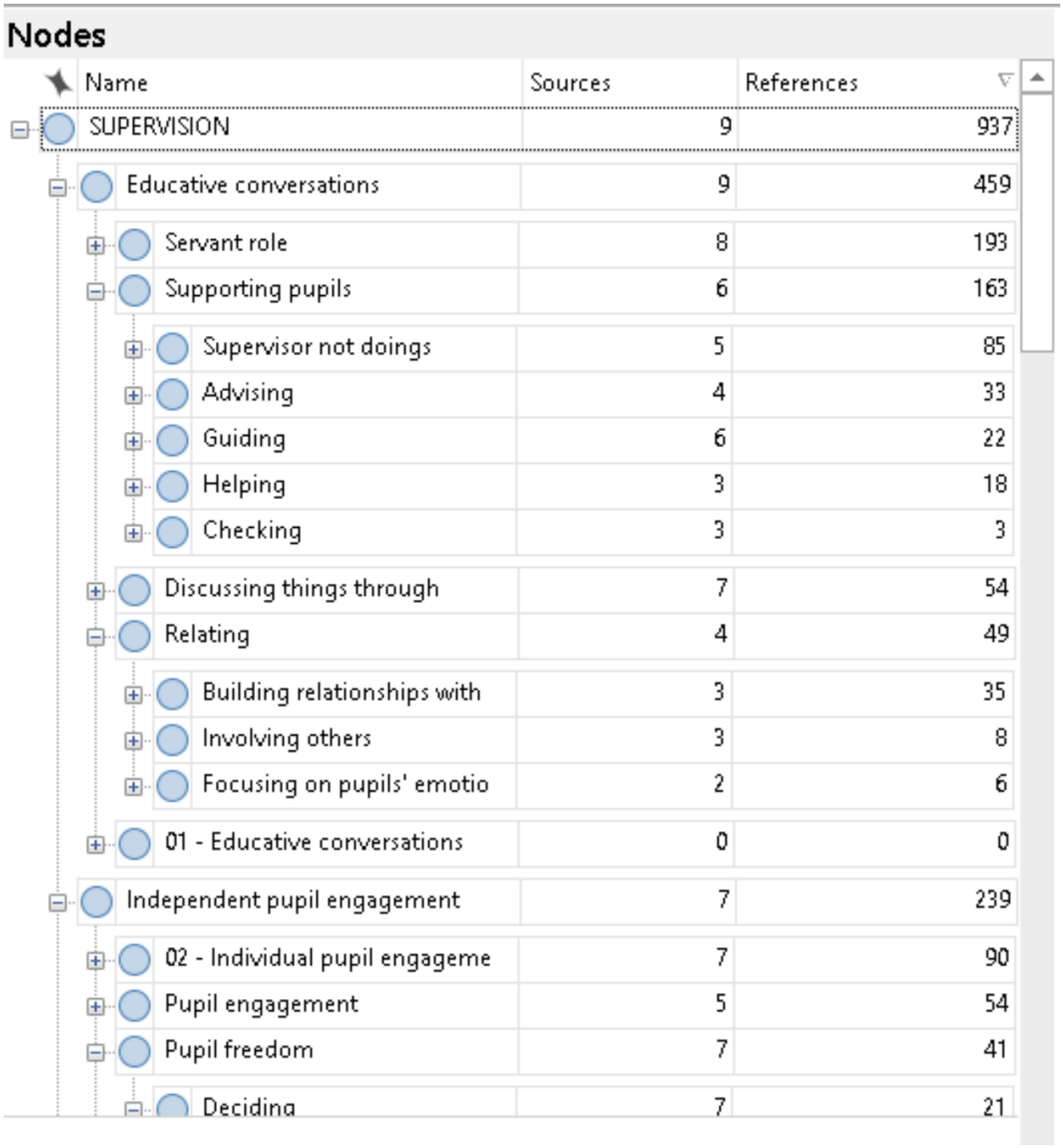
I give my consent for the Excerpt, attached herewith, from Transcript [No.], to be used as an example in *Teacher Development and Project Qualification Supervision Research Project* reports.

Name: _____

Signature: _____

Date: _____

Appendix 11: Screenshot of NVivo nodes



Nodes

Name	Sources	References
SUPERVISION	9	937
Educative conversations	9	459
Servant role	8	193
Supporting pupils	6	163
Supervisor not doings	5	85
Advising	4	33
Guiding	6	22
Helping	3	18
Checking	3	3
Discussing things through	7	54
Relating	4	49
Building relationships with	3	35
Involving others	3	8
Focusing on pupils' emotio	2	6
01 - Educative conversations	0	0
Independent pupil engagement	7	239
02 - Individual pupil engageme	7	90
Pupil engagement	5	54
Pupil freedom	7	41
Deciding	7	21