

Copyright © and Moral Rights for this thesis and, where applicable, any accompanying data are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis and the accompanying data cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content of the thesis and accompanying research data (where applicable) must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holder/s.

When referring to this thesis and any accompanying data, full bibliographic details must be given, e.g.

Thesis: Hyde, Rosalyn Margaret (2019) "A study of the perceptions of secondary teachers regarding apprenticeship on an employment-led teacher preparation route", University of Southampton, Southampton Education School, PhD Thesis, 315pp.

UNIVERSITY OF SOUTHAMPTON

FACULTY OF SOCIAL SCIENCES

Southampton Education School

**A study of the perceptions of secondary teachers regarding
apprenticeship on an employment-led teacher preparation route**

by

Rosalyn Margaret Hyde

Thesis for the degree of Doctor of Philosophy

December 2018

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL SCIENCES

Education

Thesis for the degree of Doctor of Philosophy

**A STUDY OF THE PERCEPTIONS OF SECONDARY TEACHERS
REGARDING APPRENTICESHIP ON AN EMPLOYMENT-LED TEACHER
PREPARATION ROUTE**

Rosalyn Margaret Hyde

This study examines the learning of teachers on one English employment-led secondary teacher preparation route. An interpretivist perspective is taken using a teacher self-efficacy survey with a larger sample of teachers following a range of routes and semi-structured interviews with 13 secondary school teachers who had previously qualified through an employment-led route. The literature base identified teacher preparation as workplace learning as an under-researched field, and employment-led routes as under-researched generally. Hence this study contributes to developing knowledge in these fields. It also gives voice to those learning in schools who are under-represented in the existing research on workplace learning.

The findings of the survey are cautious and indicate similar levels of self-efficacy for those who had followed school-led (including employment-led) and university-led teacher preparation routes. It also finds greater variation in self-efficacy for those who had followed a school-led route compared with those who had followed a university-led route. These findings contribute additional findings to the very limited published research regarding the self-efficacy of English teachers.

Participants identified a number of meaningful experiences from their employment-led secondary teacher preparation including practising and belonging in a school. The interview data identified transformation, identity development, relational development through reflexivity and recontextualisation as key processes impacting on their learning. The study proposes an adaptation of Fuller & Unwin's (2008) expansive/restrictive framework for apprenticeship to suit the learning experiences in school of those on employment-led teacher preparation routes. Use of this framework, and analysis against key features of situated learning and apprenticeship, found that aspects of these modes of learning were present through experiences where secondary pre-service teachers were both learners and employees, through being part of communities within a school, and through extensive opportunities to practice teaching.

Table of Contents

ABSTRACT	i
Table of Contents	i
List of tables.....	vii
List of figures.....	ix
DECLARATION OF AUTHORSHIP	xi
Acknowledgements	xiii
Abbreviations.....	xv
Chapter 1: Introduction.....	1
1.1 Overview	1
1.2 Definitions	1
1.3 Context.....	4
1.4 Teacher preparation context.....	4
1.4.1 International perspectives on teacher preparation.....	5
1.4.2 A recent historical perspective on teacher preparation in England	6
1.4.3 Teacher preparation in the current English context	8
1.4.4 Challenges facing teacher preparation in England	11
1.5 Workplace learning.....	12
1.5.1 Learning through apprenticeship.....	13
1.6 A personal perspective	15
1.7 Rationale.....	15
1.8 Aims and purpose of the study.....	16
1.8.1 Aims	16
1.8.2 Research questions	17
1.8.3 Outline philosophy and methodology	17
1.9 Thesis structure	18
Chapter 2: Literature review.....	19
2.1 Overview	19
2.2 Orientations to teacher knowledge, learning and teacher preparation	19
2.2.1 Teacher knowledge	19
2.2.2 The professional knowledge of teachers	20
2.2.3 The teacher as craft worker	25
2.2.4 The teacher as executive technician.....	27
2.2.5 The teacher as reflective practitioner	28
2.2.6 Orientations to teacher learning and teacher preparation	30

2.2.7	Teacher preparation	32
2.3	Situated learning	33
2.3.1	Situated learning theory	33
2.3.2	Situated learning as applied to teacher preparation.....	38
2.4	Teacher identity.....	41
2.5	Self-efficacy.....	42
2.5.1	Self-efficacy as a construct.....	42
2.5.2	Teacher self-efficacy and teacher behaviours.....	44
2.5.3	Teacher self-efficacy and student attainment	46
2.6	Theory and practice in teacher preparation	49
2.6.1	The role of 'theory' in teacher preparation	49
2.6.2	The difficult relationship between theory and practice...	51
2.6.3	'Theory' as an effective force in teacher preparation	52
2.7	Mentoring in teacher preparation.....	54
2.8	Teacher preparation, workplace learning and apprenticeship....	57
2.8.1	Apprenticeship as a model for teacher preparation	57
2.8.2	Limitations with apprenticeship models for teacher preparation	60
2.8.3	The 'expansive/restrictive continuum' in apprenticeship	63
2.8.4	Developing the expansive/restrictive continuum for teacher preparation	65
2.8.5	Analysis of school placement experience as expansive apprenticeship	67
2.9	Teacher preparation routes.....	75
2.9.1	Teacher preparation programmes in the USA	75
2.9.2	Research findings regarding different preparation routes	79
2.9.3	Research findings regarding school-led routes in England	82
2.9.4	The role of the university in teacher preparation	84
2.9.5	Constraints and contestations in school-led teacher preparation routes.....	86
2.10	Summary.....	88
Chapter 3:	Research design.....	91
3.1	Introduction	91
3.2	Research perspectives	91
3.3	Reflexivity	93

3.4	Methodological approaches	94
3.4.1	Mixed research designs.....	95
3.4.2	Quality.....	97
3.5	Research questions	98
3.5.1	Question 1	98
3.5.2	Question 2	99
3.5.3	Question 3	100
3.5.4	Question 4	100
3.6	The mixed research design for this study	101
3.7	Ethical considerations.....	101
3.8	Self-efficacy survey	102
3.8.1	Measuring self-efficacy.....	102
3.8.2	Survey administration and design	105
3.8.3	Survey quality	109
3.8.4	Survey analysis.....	111
3.9	Interviews	111
3.9.1	Sample.....	111
3.9.2	Interviews	114
3.9.3	Pilot Interviews.....	116
3.9.4	Interview data quality	118
3.9.5	Data analysis.....	119
3.10	Summary.....	122
Chapter 4:	Analysis of survey results.....	123
4.1	Introduction.....	123
4.2	Response rates.....	123
4.3	Survey results.....	124
4.4	Comparisons.....	126
4.5	Findings by factor	127
4.6	Interpretation of results.....	132
4.7	Implications	133
4.8	The outcomes of teacher preparation	134
4.9	Conclusions	136
Chapter 5:	Analysis of interview data.....	139
5.1	Introduction.....	139
5.2	Analysis	139
5.2.1	The curriculum mentoring relationship.....	140

5.2.2	The relationship between theory and practice	148
5.2.3	The culture and relationships in the workplace	155
5.3	Conclusions.....	161
Chapter 6:	Further analysis and discussion.....	163
6.1	Introduction	163
6.2	Teacher preparation as apprenticeship.....	163
6.2.1	Collaboration	167
6.2.2	Transition to teaching	167
6.2.3	Aims of programme.....	169
6.2.4	Career future.....	170
6.2.5	Identity	170
6.3	Content knowledge and pedagogical content knowledge.....	173
6.4	Reflective practice	174
6.5	Belonging.....	175
6.6	Learning to teach.....	176
6.7	Relationships in the workplace.....	180
6.8	The value of situatedness	183
6.9	The importance of individual biography.....	184
6.10	Conclusions.....	185
Chapter 7:	Conclusions and reflections	189
7.1	Introduction	189
7.2	The purposes of teacher preparation	189
7.3	Context and complexity in teacher preparation.....	190
7.4	Research questions.....	191
7.4.1	Question 1	194
7.4.2	Question 2	194
7.4.3	Question 3	195
7.4.4	Question 4	196
7.5	Claims about quality.....	197
7.6	Generalisation	198
7.7	Limitations	199
7.8	Contribution and originality.....	200
7.9	'Fragility' as a descriptor of teacher preparation.....	202
7.10	Relevance.....	203
7.10.1	Pre-service teachers.....	203
7.10.2	Mentors	203

7.10.3 School leaders.....	204
7.10.4 University-based teacher educators.....	204
7.10.5 Government.....	204
7.11 Implications	205
7.12 Personal reflection.....	207
7.13 Future research directions	208
7.14 Conclusions	209
Appendices	211
Appendix 1: A historical perspective on teacher preparation in England.....	213
Appendix 2: A historical perspective on apprenticeship across professions	215
Appendix 3: Adapted expansive/restrictive continuum.....	217
Appendix 4: Ethics approval (self-efficacy survey).....	219
Appendix 5: Ethics approval (interviews)	221
Appendix 6: Survey.....	223
Appendix 7: Participant Information Sheet (survey).....	225
Appendix 8: Pen portraits and interview summaries	227
Appendix 9: Code descriptors.....	247
Appendix 10: Participant Information Sheet and consent form (interviews)	251
Appendix 11: Interview schedule	253
Appendix 12: Transcript excerpts	257
References	261

List of tables

Table 1 Typology of phases in the recent development of teacher preparation in England	7
Table 2 Connections between 'research-based clinical practice' and 'expansive' apprenticeship.....	69
Table 3 Symonds & Gorard's (2010, p.132) core research design mechanisms 96	
Table 4 Initial themes and codes	121
Table 5 Mean scores by survey question.....	125
Table 6 Cronbach's alpha coefficients.....	128
Table 7 Mean scores by factor	130
Table 8 Total composite scores	132
Table 9 Comparison of self-efficacy measure with Teachers' Standards.....	135
Table 10 Comparison of interview data and continuum	164
Table 11 Typography summarising nature of aspects in employment-led teacher preparation	166
Table 12 Comparison of interviews and boundary learning mechanisms (Akkerman and Bakker 2011).....	171
Table 13 Findings mapped to Research questions 2, 3 and 4.....	192

List of figures

Figure 1 Wringe's (2012) conceptions of know-how	21
Figure 2 Mattson et al.'s (2011) types of knowledge	22
Figure 3 Pring's conceptual differences (according to Oancea and Orchard 2012)	23
Figure 4 Different views of the teacher (Pring 2011)	23
Figure 5 Heikkinen et al.'s (2011) model of professional learning	24
Figure 6 Winch et al.'s (2013) model of teacher qualities	25
Figure 7 Approaches to apprenticeship: the expansive/restrictive continuum (Fuller and Unwin 2008).....	65
Figure 8 The expansive/restrictive continuum: original and adapted for teacher preparation.....	67
Figure 9 Hodgkinson & Hodgkinson's expansive and restrictive learning environments for teachers (Evans et al. 2006).....	72
Figure 10 Modified expansive/restrictive continuum for teacher preparation.	74
Figure 11 the 12-item Teachers' Self-Efficacy Scale (TSES) (Tschannen-Moran and Woolfolk Hoy 2001)	104
Figure 12 Modelling employment-led teacher preparation as situated learning 115	
Figure 13 Collaboration continuum	167
Figure 14 Transition continuum	167
Figure 15 Aim continuum.....	169
Figure 16 Career future continuum	170
Figure 17 Identity continuum	170

DECLARATION OF AUTHORSHIP

I, Rosalyn Margaret Hyde

declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

A study of the perceptions of secondary teachers regarding apprenticeship on an employment-led teacher preparation route

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission.

Acknowledgements

I would like to take this opportunity to thank all those who have supported me on my PhD journey. In particular, I'd like to thank my colleagues at Southampton Education School who have asked after my progress, worked with me and supported me. In particular I'd like to thank Keith Jones who mentored me as a new teacher educator, and Julie-Ann Edwards, who has taught me much about writing well. Special thanks go to my supervisors, Gary Kinchin and Martin Dyke, who have both encouraged me and challenged me throughout the process.

A huge final thanks goes to my husband Shaun. Not just for his help in producing the lovely diagrams and helping with the formatting, but also for his long-suffering in the face of a project that has taken up a considerable amount of my time over the last four years.

Abbreviations

ATL – Association of Teachers and Lecturers

DfE – Department for Education (England)

GA – Geographical Association

GTP – Graduate Training Programme (now not available in England)

HEI – Higher Education Institution

IFS – Institute of Fiscal Studies

ITE – Initial Teacher Education

ITT – Initial Teacher Training

NATE – National Association of Teachers of English NATE

NCTL – National College for Teaching and Leadership (a governmental agency)

NQT – Newly Qualified Teacher

PGCE – Post Graduate Certificate of Education

QTS – Qualified Teacher Status

SCITT – School-Centred Initial Teacher Training

TSE – Teacher Self Efficacy

UTR – Urban Teacher Residencies

Chapter 1: Introduction

1.1 Overview

The purpose of this study is to investigate the learning of pre-service secondary school teachers on an employment-led teacher preparation programme in England. The recent expansion of school-led programmes (a designation that includes a range of types of programmes, including employment-led) for teacher preparation in England orienting teaching as a craft reveals a new landscape that needs exploring and mapping. The extent to which teacher preparation can be understood using models of workplace learning is under-researched (2014a, p.241). Hence, this thesis seeks to make new connections between research about learning through apprenticeship and teacher preparation and to explore what can be learnt and applied from the wider world of workplace learning to employment-led teacher preparation for secondary school teachers. It further seeks to explore teacher preparation through teacher self-efficacy scores from those who followed different types of programme, and through using interviews with those who followed one such employment-led programme for secondary school teaching to identify affordances and processes that had impacted on their experiences when becoming a secondary teacher.

1.2 Definitions

Employment-led teacher preparation – In this form of teacher preparation in England, beginning teachers are employed as unqualified teachers concurrent to their teacher preparation programme. Those undertaking these types of programme are paid a salary and do not pay tuition fees. They must have worked in some capacity, not necessarily in a school, for at least three years prior to joining the programme and may work in either supernumerary or non-supernumerary capacities (or a mix of both).

Postgraduate Certificate in Education – the academic award made by Higher Education Institutions (HEIs) on successful completion of teacher preparation and may include the award of academic credits at Master's level.

Chapter 1: Introduction

Pre-service teachers – In this study those who are not qualified teachers who are following teacher preparation programmes are called ‘pre-service teachers’. Such a term has its limitations, particularly as in this study this term is also used for those employed as unqualified teachers concurrently studying for their teaching qualification. In England, pre-service teachers are frequently referred to as ‘trainees’, in keeping with the notion of ‘training’.

Provider – Teacher preparation is organised and facilitated by a range of organisations including universities, colleges, groups of schools, individual schools, charities and other organisations. These are called ‘providers’ by the Department for Education and the term is used here as a ‘catch-all’ for those organisations facilitating teacher preparation

Qualified Teacher Status – The award of Qualified Teacher Status (QTS) is the formal recognition required by teachers in England and was held by 95.1% of the workforce in 2015 (Department for Education 2016).

School Direct – The name given by the Department for Education (DfE) to the recent school-led teacher preparation routes in England launched for the 2012-13 academic year. Further details are in section 1.4.3.

School placement – A number of different phrases are used to describe the time spent in schools by those pursuing teacher qualification. In traditional university-led programmes in England this period in school is colloquially referred to as ‘teaching practice’, but the literature also uses ‘practicum’, ‘field experience’ for short periods of supervised observation in school and ‘clinical practice’. The latter is a term with a tighter definition so ‘school placement’ is the term that will be used here for time spent in a school environment.

School-led teacher preparation – this type of teacher preparation in England is characterised by being led by a school, or group of schools, who organise and facilitate the teacher preparation programme. The programme may be provided entirely within schools, or offered in partnership with a Higher Education Institution (HEI). The role of the HEI in these programmes varies considerably and these programmes can be of varied and localised design. Some schools are able to make recommendations for QTS for successful completion of programmes; for others the partner HEI will award this. School-led programmes can either be employment-led, or charge tuition fees with the

pre-service teacher receiving a bursary, the amount of which depends on the subject they are preparing to teach and their previous qualifications. There are two main types of school-led route: ***School Direct*** (including salaried and tuition fee programmes) and ***School-Centred Initial Teacher Training*** (tuition fee programmes only).

School-mentor – This term is used in this study for the class teacher who is supporting the pre-service teacher whilst they are in school on placement. In the English context this role includes aspects of mentoring and education of the pre-service teacher. Elsewhere this person may be called the supervising, or co-operating teacher and may have a slightly different role.

Subject Knowledge Enhancement Course (SKE) – Pre-service teachers following a postgraduate route are expected to have a Bachelor's degree in a relevant subject area. Those who wish to prepare to teach a 'shortage subject', such as mathematics, chemistry, physics or computer science, but who have insufficient relevant subject knowledge may be required to follow a Subject Knowledge Enhancement course prior to their PGCE.

Teacher educator – Here this term is reserved for those who work specifically with a teacher education role, generally within a HEI, although, increasingly, there are those with similar roles within a school context.

Teacher preparation – For the sake of consistency and clarity, the term 'teacher preparation' will be used to describe programmes, which may take many forms, that those who are not qualified teachers (in England this means does not hold QTS) follow in order to gain this recognition. In England, teacher preparation is variously called 'initial teacher training' (ITT - the government official terminology) or 'initial teacher education' (ITE), by those who prefer the notion of 'education' rather than 'training'.

University-led teacher preparation – Over 70 HEIs in England have teacher preparation programmes and these, traditionally, provided the vast majority of teacher preparation. Universities have the power to recommend the award of QTS for successful completion of programmes. University-led secondary PGCE programmes must be structured so that pre-service teachers spend at least 24 weeks out of the 36 week programme in school on school placement and this must be split across two schools. Such programmes generally have an element

Chapter 1: Introduction

of partnership between the university and schools in their design. University-led programmes charge tuition fees and may award a bursary, as with non-employment school-led routes.

In this thesis, unless otherwise stated, references and remarks are regarding the preparation of secondary school teachers rather than any other phase of school.

1.3 Context

Teacher preparation has elements of both academic education and workplace learning. School teaching is concerned with the academic learning of others and requires elements of prior academic learning on the part of those wanting to become teachers. Teacher preparation is also vocational preparation for a profession requiring time to be spent in schools; this type of workplace preparation may be characterised as apprenticeship (see section 2.8). That teacher preparation should include time spent learning in school classrooms is not generally in dispute. However, there are different models of, and different views about, the appropriate balance necessary between academic learning generally undertaken in a university (theory) and the more practical learning undertaken in a school setting (practice). The complexity of the relationship between theory and practice in teacher preparation is explored in more detail in section 2.6 and different models of teacher preparation are considered in section 2.2. Views about the balance between these two elements are underpinned by understandings of the types of knowledge teachers require and this also provides a focus for section 2.2.

This introductory chapter now sets the context for the preparation of secondary school teachers in terms of international perspectives before moving on to considering teacher preparation in England both using historical perspectives and setting the context at the time of writing.

1.4 Teacher preparation context

That education is of huge value to a national economy and to the welfare of its citizens is clear (UNESCO 2011; United Nations 2014). It is also a considerable cost to national budgets with teachers' salaries as "usually the largest part of

expenditure on education” (OECD 2014, p.286). Many countries express concern about maintaining an adequate supply of high quality teachers (OECD 2011) and therefore teacher preparation is also of considerable interest world-wide.

1.4.1 International perspectives on teacher preparation

Teacher preparation takes different forms in different countries and the purpose in this section is to broadly set the context in terms of teacher preparation internationally. Countries such as Scotland (Conroy et al. 2014;Munn 2008), Canada (Kosnick et al. 2011), Finland (Sahlberg 2012), Portugal (Flores 2014), the Republic of Ireland (Conway et al. 2014) and Singapore (Goodwin 2012) have all their teacher-preparation programmes as university-based. Most teachers in Europe are prepared through university teacher preparation programmes, although, according to the European Commission (2015) 18 out of 23 countries offer some kind of non-traditional pathway. Furthermore, in Finland (Kansanen 2014) and Portugal (Flores 2014) all teachers have Master’s degrees. From the literature, the situation in Hong Kong seems less clear, with Draper asserting that teacher preparation there is “located firmly in Higher Education Institutions” (2012, p.81) and Darling-Hammond and Liberman (2012) suggesting that there is a degree of ‘alternative certification’ in Hong Kong. Other literature is available giving a country-by-country breakdown of teacher preparation (see, for example, Darling-Hammond & Lieberman 2012;Tatto 2013 and O’Donoghue & Whitehead 2008).

O’Donoghue and Whitehead (2008a) provide a useful comparative analysis of teacher preparation across the ten English-speaking countries they surveyed. They identify three stages through which teacher preparation programmes in all ten countries have progressed: “the teacher-apprenticeship stage”; “the college-based teacher training stage” and “the college or university-based teacher education stage” (*ibid.* p.192). These three stages can be seen in Appendix 1 which charts some of the history of teacher preparation in England. O’Donoghue and Whitehead further provide an interesting summary of their work stating that “what is striking regarding current developments internationally is the extent to which fragmentation is now taking place” (2008b, p.194). This ‘fragmentation’ provides the international context for this

Chapter 1: Introduction

study and section 2.9.2 provides further discussion comparing preparation routes.

1.4.2 A recent historical perspective on teacher preparation in England

Considering the more recent history of teacher preparation in England, the work of Browne and Reid (2012) identifies teacher preparation from the 1970's onwards in England as having five "distinct periods". They distinguish between these periods in terms of the location, structure, and pedagogical approach of teacher preparation. I have used these as headings in Table 1 and summarised the key features of each of these periods, drawing on the work of Browne and Reid (2012).

Table 1 Typology of phases in the recent development of teacher preparation in England

Dates	Location	Structure	Pedagogical approach
Pre-1983	HEI	HEI-dominant model 'transactional relationship' with schools Mentor as friend and informal guide	Theory-informed
1983 – 1992	HEI/(school)	Hybrid model Greater involvement of schools	"less attention to academic research" and "more focus on the skills of practice" (Browne and Reid 2012 , p.500)
1993 – 2002	(HEI)/school	"move away from university-led teacher education" (<i>ibid.</i> p.500) and the central place of the HEI 'loose partnerships' with schools Rapid pace of change More involvement of teachers	Competency approach Focal point became "elements of practice observed in classroom activity" (<i>ibid.</i> p.501) Practice privileged over theory
2002 – 2010	School/(HEI)	More collaborative models "greater involvement of schools and schoolteachers" (<i>ibid.</i> p.502) School placement given 'prime position' Class teacher as mentor	"practical skills approach to training" (<i>ibid.</i> p.502) "focus from universities on integration of theory and practice" (<i>ibid.</i> p.502) "empirically grounded reflective processes" (<i>ibid.</i> p.502) Specialised pedagogical instruction
2010 onwards	School?	Developments towards a 'school-dominant' model Decrease and undermining of universities' role in teacher preparation Diversity of models Increased variation in the system Pivotal role of school mentor and developing role of the school-based teacher educator (White 2013)	Teaching as a craft learnt 'on the job' A degree of 'what works'

Chapter 1: Introduction

It is clear that change in teacher preparation in England is not a new phenomenon, and also that the shifts in location, structure and pedagogical approach are deep-rooted. Browne and Reid describe “30 years of transformation of the role played by higher education institutions” (2012, p.498) and, back in 1999, Hayes described teacher preparation as facing ‘fresh initiatives’ and ‘uncertainty’. Other literature bears out the story that the place we find ourselves in at the time of writing is the culmination of constant change over many years. Bills et al., setting changes at that time in the wider context of national and international change, describe the situation as one of ‘turbulence’ and as “characterised by some broad themes” (2007, p.2) in terms of:

- the location of teacher preparation;
- “movement towards performance-based assessment” (*ibid.* p.2);
- “concern about the underpinning knowledge base in initial training” (*ibid.* p.2).

These three themes closely reflect the concerns arising in the work of Browne and Reid (2012) and lay the foundations for practices in teacher preparation in England. What is also clear from the literature, and my personal experience as a teacher educator, is the extent to which political ambitions are enacted through education policy in England.

1.4.3 Teacher preparation in the current English context

The previous section provides evidence that the current difficulties faced in teacher preparation are not new. Gerwitz concurs: “The direction of policy is not new; rather what we are seeing is a rapid intensification of trends set in train by previous governments” (2013, p.10).

In 2010, the then Secretary of State for Education, Michael Gove, announced that the government would “Reform initial teacher training so that more training is on the job” (Department for Education 2010, p.20). This effectively reduced the role of universities in teacher preparation as more programmes became what is called ‘school-led’.

School-led teacher preparation had existed in England for some time through employer-based routes (EBITTs) such as the now defunct Graduate Teacher

Programme (GTP) and the now expanding School-Centred Initial Teacher Training (SCITT) routes. What changed with Gove's 2010 announcement was the scale and shift in emphasis to school-led teacher preparation – a move to programmes that Gove (2010) described as 'apprenticeship' and are described on the Department for Education (2014) website as learning 'on the job'. A new route, School Direct, with 'training' and 'salaried' versions, was later announced and is described on the Department for Education (2014) website as providing "practical hands-on training and education based in schools across the country" and as "designed by groups of schools....based on the skills they are looking for in a newly qualified teacher". McNamara and Murray provide a more critical, and in my view, more accurate, description of School Direct as:

a demand-led model in which schools recruit pre-service teachers, with a view to subsequent employment, and the commissioning of universities (or other training providers) to manage and accredit their training (2013, p.14).

Sheldon (2011) makes reference to proposals from 1983 that demonstrate that this is not the first time that apprenticeship has been proposed as a model for teacher preparation. Nor is it the first time that university teacher preparation has been challenged in this way - there was a proposal from the Conservative Party Think Tank in 1990 that "called for the disbanding of all institutions with postgraduate teacher training awarding powers" and a move to a system where pre-service teachers were apprenticed to schools (Browne and Reid 2012, p.501). However, Brown & Reid go on to say that fierce opposition to these proposals meant that they were never developed or implemented.

The recent move to school-led teacher preparation has been rapid and large scale. The academic year 2012-13 saw a small pilot of the new School Direct programmes with large-scale roll-out in 2013-14 and a further shift towards school-led provision in the following two years. In 2011-12 80% of all teacher preparation places were allocated directly to universities with 20% allocated to other routes including school-based programmes. In 2013-14 the proportion of places allocated to school-led training across all phases rose to 31% and for 2015-16 this increased to 49% (Universities UK 2014). In 2015-16 3,166 primary and secondary pre-service teachers started salaried (i.e. employment-led) School Direct programmes (10% of the total number of pre-service

Chapter 1: Introduction

teachers) and there were 841 School Direct partnerships (National Audit Office 2016). Each partnership works with a number of other schools and some schools work with several partnerships, as well as other providers, so it is difficult to determine how many schools are directly involved in teacher preparation through School Direct routes, other than to say it is a very substantial number.

There are now numerous routes to qualification as a teacher in England, each with a degree of difference in their features, provided by a wide range of 'providers'. Another recent development is the announcement of 'Postgraduate Teacher Apprenticeships', announced in October 2017 and starting in September 2018. These programmes will allow schools to access funds they have paid into the 'apprenticeship levy' (paid by large employers) and use these to pay towards teacher preparation. In this latest development, those wishing to become teachers will be paid as unqualified teachers and spend 16 months on an apprenticeship programme leading to QTS (Department for Education 2017). A non-graduate teacher apprenticeship programme is due to follow (Whittaker 2017). One clear difference between programmes is between those that are designated as 'training' routes and those designated as 'employment' routes. Those on programmes where pre-service teachers have 'training' status, i.e. traditional university-led programmes and school-led training programmes, pay fees for their training and for those training to teach most secondary school subjects, receive a bursary. The amount of the bursary depends on their previous qualifications, including class of degree, and the subject they are preparing to teach. Bursaries vary from year to year and for 2018-19 and 2019-20 early career payments in addition to bursaries are available for those preparing to teach secondary mathematics (Department for Education 2018).

Traditionally, government have set the number of places for teacher preparation and allocated places per secondary school subject to each provider each year. Recruitment for 2016-17 saw a change in this system to one with fewer controls from central government, with recruitment for 2017-18 returning to a variant of the previous 'quota' model with a greater degree of control imposed centrally. The model for recruitment for 2018-19 changed again to one with less central control, in response to increasing teacher shortages. A degree of stability was introduced in the autumn of 2018 when

those providers considered to be in the 'top 25%' were offered guaranteed numbers of places for three years. These changes, and change in the model used year on year, introduce a degree of competition between providers given teacher shortages and a degree of uncertainty and instability for providers.

1.4.4 Challenges facing teacher preparation in England

Unsurprisingly, the large-scale and rapid move to teacher preparation being provided through school-led routes, and through School Direct in particular, is having substantial impact on 'traditional' university-led teacher preparation programmes. Universities UK report that "the speed and magnitude of the change in allocations has led to questions being asked about the long-term viability of delivering ITT courses in certain subject areas, or even in the overall delivery of ITT" (2014, p.2). This report also notes that School Direct routes recruited to only two-thirds of their allocation in 2013-14 and was more successful in recruiting to subjects such as English and history than into subjects such as mathematics and physics, where there are long-standing teacher shortages in England.

Whilst most schools offer these new School Direct programmes in partnership with universities, the role of the university is much reduced and the shift of resource allocation reduces university income as a consequence. The multiplicity of providers of School Direct programmes has the potential to lead to wider variation in provision for pre-service teachers and a concern that "diversity of practice will bring diversity of quality" (Burgess 2013, p.9).

Million+ describes the role of universities in teacher preparation as being 'devalued' and universities facing "constant disruptive intervention across their provision" (2013, p.6). At the wider system level, Howson and Waterman say that government reforms are "in danger of destabilising initial teacher training" (2013, p.3) and Gewirtz describes the emerging situation as "one of fragmentation with a proliferation of training routes" (2013, p.10).

The degree to which the nature of teacher preparation is changed and the role of universities undermined is expressed by McNamara and Murray:

Gove's reforms...are radical in that they combine three elements: an ideologically driven understanding of teaching as essentially only a 'craft' rather than as a complex and fundamentally intellectual activity;

Chapter 1: Introduction

an apprenticeship model of teacher training that can be located entirely in the workplace, and the related and entirely questionable assumption that a longer period of time in school inevitably – and unproblematically – leads to better and ‘more relevant’ student learning (2013, p.14).

We are left in a situation where Burgess says that teacher educators and universities need to rise to “the challenge of finding new ways of working within the redrawn boundaries of teacher training” (2013, p.9).

1.5 Workplace learning

Very often it seems that there is juxtaposition between learning in the workplace and learning in the academy in teacher preparation. At its foundation, this is about the relationship between learning theory and undertaking practice (discussed in section 2.6) rather than the location of the learning. It is also partly a function of competition for power and status rather than a simple dichotomy. When drawing together his research on workplace learning for professionals, technicians and managers, Eraut found that most of those he interviewed equated “learning with formal education and training” and assumed “working and learning are two quite separate activities that never overlap” (2004, p.249). Guile and Young (1999) identify differences in learning in the two environments with formal education being an individual, mental process leading to generalisation and informal learning in the workplace being characterised by collaboration, the use of tools and leading to contextual learning. Given these differences and the strong focus on being in the workplace in employment-led teacher preparation, the context is further set for this study. This theme is developed more fully in section 2.8.

The relevance and application of research into workplace learning to teacher preparation is explored throughout this study. Eraut (2009) suggests four different circumstances as to the awareness of learners regarding the knowledge embedded in their practice:

- modelled on that of others without understanding;
- developed with some awareness of theory but without justification;
- justified but not responsive to challenge because of a lack of critical evaluation;

justified and under critical control with periodic re-evaluation.

These circumstances are discussed with reference to the data collected in this study in section 6.6.

Research on workplace learning provides some lenses through which to view teacher preparation. Eraut (2004, pp.266-7) identifies four different types of work activity leading to learning:

“participation in group activities...”

“working alongside others....”

“tackling challenging tasks....”

“working with clients....”

These are returned to in the context of the data analysis in section 6.8. Eraut (2004) also identifies the central and complex nature of relationships in the workplace.

Another model is provided by the work of Illeris which provides a broad basis for examining workplace learning, through what he calls three dimensions:

The content dimension of knowledge, understandings, skills, abilities, attitudes and the like; the incentive dimension of emotion, feelings, motivation and volition; and the social dimension of interaction, communication and cooperation – all of which are embedded in a societally situated context (2011, p.35).

All three of these dimensions can be tracked through the analysis and discussion in the latter part of this study.

1.5.1 Learning through apprenticeship

A common characterisation used for those learning at work, particularly as beginners, is to describe them as ‘apprentices’. Common current understandings about apprenticeship relate to preparation for work (Grubb and Lazerson 2006) of a vocational nature (Fuller and Unwin 2008) that is tied closely to a specific occupation through a programme with a considerable element of workplace learning (Ryan and Unwin 2001). More specific definitions for particular expressions of apprenticeship also refer to structured programmes, employer involvement and a focus on young people (Ryan and Unwin 2001). The definition used by Gospel asserts the “reciprocal rights and duties” (1998, p.436) of the employer and employee and, in the Foreword to

Chapter 1: Introduction

Fuller and Unwin (2008), Diamond provides a slightly different emphasis, reflecting Lave and Wenger (1991), when he describes apprenticeship as the “process of learning new and valuable skills from a seasoned professional” (Fuller and Unwin 2008, p.2).

As noted by Aldrich (1999), it is important to distinguish between two ‘historic’ aspects of apprenticeship: that pertaining to the learning of a profession; and that to the learning of a trade, craft or industrial process through skill formation (Guile and Young 1999). As a foundation, apprenticeship has a basis in situated learning (see section 2.3), where learning in the workplace is considered to be essential to development. Further detail on historical aspects of apprenticeship in various professions can be found in Appendix 2. Current thinking in the field of apprenticeship learning seeks to connect theoretical and practical learning in meaningful ways (Fuller and Unwin 2008;Guile and Young 1999).

As the research indicates, apprenticeship learning is a complex matter. Fuller and Unwin describe the position of apprenticeship in modern times as “ambiguous” across the “education and employment paradigms” (2008, p.14) where an over-focus on one leads to a deficit in the other and Grubb and Lazerson (2006) suggest that, when preparation for work shifts from the workplace to educational institutions, preparation for work and work itself can become separated. Fuller and Unwin (2003) identify ‘model of learning’, ‘employer need’ and ‘the way the State uses apprenticeship’ as competing elements to developing an understanding of apprenticeship.

As a form of learning for the world of work, apprenticeship has critics, for example, Grubb and Lazerson (2006) raise a number of concerns, including its lack of suitability for employment conditions that are unstable. Engeström (2001) goes further, suggesting that the learning undertaken in the workplace is often not stable or well-defined in advance. He then uses this as an argument for new ways of conceptualising workplace learning through ‘activity systems’ and ‘expansive learning’.

Starting in any occupation requires a degree of learning or, at the very least, application of previous skill to a new environment. Lortie suggests that what he calls ‘mediated entry’ is found “under various labels and in a wide range of occupations” (2002, p.59) and Lave and Wenger assert that in the U.S.A. “much

learning occurs in the form of apprenticeship, especially wherever high levels of knowledge and skill are in demand (e.g. medicine, law, the academy, professional sports, and the arts)” (1991, p.63).

1.6 A personal perspective

My personal interest in this area stems from having worked as a teacher educator on teacher preparation programmes for some time, following a previous career as a secondary school mathematics teacher. The recent shift to school-led teacher preparation routes has not only changed aspects of my working life but also caused me to reflect more deeply on the nature and purpose of teacher preparation and my role as a teacher educator. Such thinking, on my part, takes place within a national context where there is considerable change and where the involvement of universities has changed and has been under threat (Universities UK 2014) and where the climate has become one with much less certainty than previously.

Personal experience provides motivation and context for this study and, as such, strengthens the work. My considerable experience as a teacher educator provides an essential element to this study and a reflexive approach is followed throughout. The importance of reflexivity is further discussed in section 3.3.

1.7 Rationale

For me, teacher preparation is a fascinating field, one where there is huge change and much challenge but also one that gives me the opportunity to work with many highly talented beginning teachers who impact on the lives of our nation’s young people. My previous experience as a secondary school teacher, along with my more recent experience as a teacher educator, suggests that beginning teachers need to develop a range of skills, both personal and professional, in order to be effective in the classroom. My experiences also suggest to me that teaching, and learning to teach, is a complex and multi-layered skill (see section 2.2).

Having been ‘forced’ into engaging with school-led teacher preparation by government policy, my task now is to try and continue to do my job in a very

Chapter 1: Introduction

different context. This challenge faces all teacher educators employed by universities; it also faces those who should now consider themselves as school-based teacher educators – because that is what they do. The same challenge is also faced by teacher educators in the U.S.A. and is beginning to face those in other countries (see section 1.4.1), particularly those where there are teacher shortages.

As I work with those who are following employment-led teacher preparation routes, I have found myself curious as to what they learn about teaching through their programme experiences and how they come to that knowledge.

So, whilst this study is clearly of personal interest, it is also of value to others both in the English context and elsewhere. It provides insight both in terms of the learning of those preparing to teach in secondary schools on employment-led teacher preparation programmes such as ‘Teach for All’ active in over 35 countries (Teach for America 2017). It also contributes to the debate with regard to apprenticeship and workplace learning in teacher preparation.

Teacher preparation with an explicitly employment-led approach is an under-researched area. There is also little published empirical research about employment-led teacher preparation, and very little that analyses the views of those following these routes.

1.8 Aims and purpose of the study

The broad aim of this study is to use self-reported data from teachers to gain a deeper understanding of the experiences of secondary teachers in England with regard to their teacher preparation.

1.8.1 Aims

The study was inspired, although it does not seek to answer the comparative aspects directly, by two questions from *Research Priorities and Questions: Teachers and Teaching* (DfE June 2013) regarding teacher supply:

Which models of teacher training add the most value and produce the best quality teachers?

Which approaches to developing and delivering initial teacher training result in the greatest impacts on learning? What benefits can different models bring?

The study uses self-efficacy data collected from those teaching different secondary school subjects who had recently completed teacher preparation through a range of routes. It also uses interview data from a smaller number of teachers who had followed one specific employment-led programme. This interview data is used to consider their perceptions of their experiences and to identify aspects of apprenticeship and situated-learning in employment-led teacher preparation.

1.8.2 Research questions

The questions for this study have been developed from the underpinning described in the previous section and are as follows:

- What differences are there in the self-efficacy of newly-qualified secondary school teachers who had followed school-led teacher preparation routes compared with those who had followed more traditional postgraduate routes?
- What insights are provided by teachers who had previously followed an employment-led secondary teacher preparation route as to the meaningful experiences they had whilst undertaking teacher preparation?
- What are some of the key developmental processes identified by teachers as having impacted on their own learning and on their experiences on an employment-led teacher preparation route?
- What do the views of participants tell us about teacher apprenticeship through an employment-led route as a model of teacher preparation?

These questions are explained and developed in more detail in section 3.5.

1.8.3 Outline philosophy and methodology

This study is rooted in an interpretivist ontology and epistemology (see section 3.2). It has a mixed design (see section 3.4.1) comprising: survey data collected about self-efficacy from newly-qualified secondary school teachers

Chapter 1: Introduction

who had previously followed a range of preparation routes (section 3.8) and interview data from secondary school teachers whose own teacher preparation had been through an employment-led teacher preparation programme (section 3.9).

1.9 Thesis structure

The structure of this study is summarised below:

Chapter 2: literature review covering models of teaching, teacher learning and teacher preparation; situated learning; teacher identity; self-efficacy; theory and practice; mentoring; workplace learning and teacher preparation routes.

Chapter 3: research design covers the philosophical basis for the study, methodological approaches, the mixed research approach and the design of the elements of the study.

Chapter 4: analysis of survey results contains the data analysis for the self-efficacy survey.

Chapter 5: analysis of interview data contains the data analysis for the teacher interview data.

Chapter 6: further analysis and discussion considers the interview data both in terms of what it indicates regarding apprenticeship as a model for teacher preparation but also develops the analysis in greater depth.

Chapter 7: Conclusions and reflections draws the findings from, and discussion in, the previous chapters together, linking the elements to the original research questions for the study. It also provides a summary of the findings and indicates possible avenues for further study.

Chapter 2: Literature review

2.1 Overview

The study is grounded in the literature through discussion regarding orientations to teacher knowledge and teacher preparation (section 2.2) and about the relationship between ‘theory’ and ‘practice’ (section 2.6), which is a frequent focus of debate in teacher preparation. The chapter further considers the research regarding different routes to teacher qualification, drawing on literature from the USA in particular (section 2.9). There is also a focus on self-efficacy (section 2.5), which informs the design of the investigation into the first research question. The presentation of employment-led teacher preparation routes as apprenticeship, and the workplace learning orientation of these routes is underpinned by the literature considered in sections 2.3 and 2.8. Sections 2.4 (teacher identity) and 2.7 (mentoring) provide a basis in the literature for other aspects of this study.

2.2 Orientations to teacher knowledge, learning and teacher preparation

2.2.1 Teacher knowledge

In considering orientations to teacher knowledge, one should bear in mind that “policy, practice and research in teacher education revolve around two enduring questions: whether effective teachers are born or made, and whether teaching is a craft or a profession” (Tatto 2013, p.2). Hargreaves asserts that there is “no agreed knowledge base for teaching” (2007, p.4) and Bransford et al. (2005) suggest that there are big questions to ask about the knowledge, skills and professional commitments required by teachers. By implication, these become big questions about the education and preparation of teachers.

Robertson, in her essay *The epistemic aims of education*, asserts that “acquiring propositional knowledge is a major aim of education” (2009, p.12), (propositional knowledge is knowing that something is so) and that knowledge requires truth and justification (otherwise, knowledge becomes entirely subjective in the mind of the knower). She goes on to say that understanding,

Chapter 2: Literature review

virtue, skills and judgement are also of importance in an education programme. She argues that learners should understand the meaning and significance of the knowledge they acquire, hence the simple transmission of facts and lists of information is insufficient, so education must be about the meaning, significance and organisation of facts as well as about learning how to develop and evaluate the beliefs of themselves and others. The education of beginning teachers should therefore comprise both propositional knowledge and learning about its meaning and significance. Feiman-Nemser and Buchmann reflect both aspects when they identify the knowledge needed by teachers as “subject matter, persons and pedagogy” (1987, p.205) and a need for “principled and strategic thinking about ends, means, and their consequences” (*ibid.* p.205).

In her later work, Feiman-Nemser (2001) identifies the central tasks of teaching as:

- “analysing beliefs and forming new visions” (p.1016);
- “developing subject matter knowledge for teaching” (p.1017);
- “developing understandings of learners and learning” (p.1018);
- “developing a beginning repertoire” (p.1018); and
- “developing the tools to study teaching” (p.1019).

This list closely reflects Shulman’s well-known ‘knowledge base for teaching’, with Shulman additionally including “knowledge of educational ends, purposes, and values, and their philosophical and historical grounds” (1987, p.8) and Grossman including “knowledge of context” (1990, p.5).

2.2.2 The professional knowledge of teachers

In this section, I have illustrated the work of various theorists regarding the components of teacher knowledge on sets of axes. These are oriented as if for three-dimensional representation and with similar conceptions in the same

orientation. Where models have four dimensions the diagram is adapted to spread the conceptions out evenly in space.

The importance of considering the nature of teacher knowledge is expressed well by Pring:

how we teach and what we think is worth teaching, embody deeper assumptions about the value about what is learnt, about the logical nature of that which is to be learnt, and about the relation of what is learnt to the wider culture we have inherited (2011, p.5).

In the broader context of writing about occupational preparation, Wringe (2012) posits three different conceptions of ‘know-how’: learning of procedures, acquisition of skills, and education. These are shown in Figure 1.

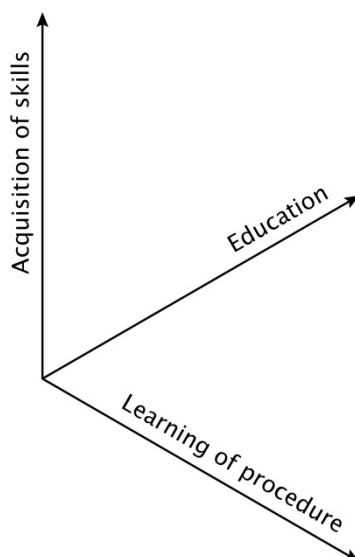


Figure 1 Wringe's (2012) conceptions of know-how

Winch distinguishes between procedures, which he says can be communicated, and skills, which he describes as “knowing how to do something” involving “the practice of a technique” (2010, p.558) with the expectation of performing with a degree of success. Wringe adds to Winch’s distinction, arguing that “skill involves the making of choices” (2015, p.20) and that actual outcomes are the means of judging successful acquisition of skills. A procedure is further defined as something that must, and can, be done correctly the first time (Wringe 2012) and a skill as something that needs to be practiced, and improves with practice, in order to develop a degree of mastery. Winch (2013) asserts that skill involves aspects of character such as diligence and persistence and that these set it apart from technique. He further argues that a

Chapter 2: Literature review

skill can be exercised in various ways, that it is likely to involve mastery of a technique and requires demonstration in a range of relevant circumstances. Wringe goes on to argue that “teaching is relatively light on procedures” but that its “success depends heavily on skill” (2012, p.5).

Wringe’s (2012) detailed arguments might be succinctly summarised by suggesting that how one prepares teachers depends fundamentally on one’s views as to the purposes of education (Beach and Bagley 2012; Heibronn and Foreman-Peck 2015). Hence he summarises, saying, “if learners are to be educated rather than merely competent and knowledgeable, their teachers must be so before them” (Wringe 2012, p.6) .

Mattson et al.’s categorisation is of professional practice knowledge as “declarative knowledge (knowing that), procedural knowledge (knowing how) and conditional knowledge (knowing when and why to apply certain procedures)” (2011, p.5). These are illustrated in Figure 2 and match well with the conceptions of ‘know-how’ in Wringe’s (2012) work.

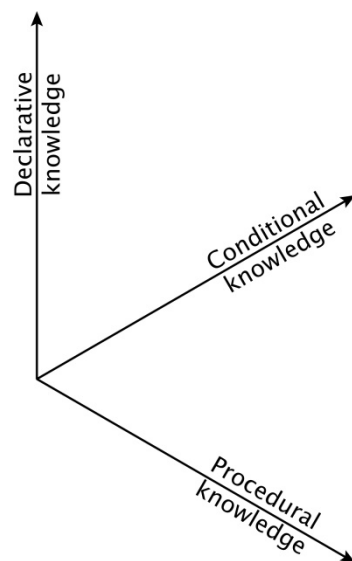


Figure 2 Mattson et al.'s (2011) types of knowledge

Figure 3 shows Oancea and Orchard’s (2012) characterisation of Pring’s (2011) identification of conceptual differences between notions of ‘instruction’, ‘training’ and ‘teaching’ (although the word ‘instruction’ doesn’t actually appear in Pring’s work). That these notions are not interchangeable is important to acknowledge because of their use in literature about teaching and learning.

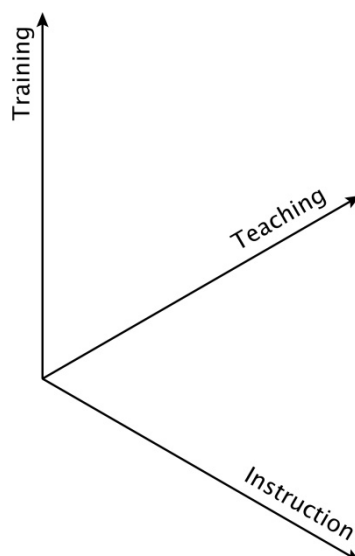


Figure 3 Pring's conceptual differences (according to Oancea and Orchard 2012)

Also using Pring's (2011) work, different views of the teacher may be represented as shown in Figure 4.

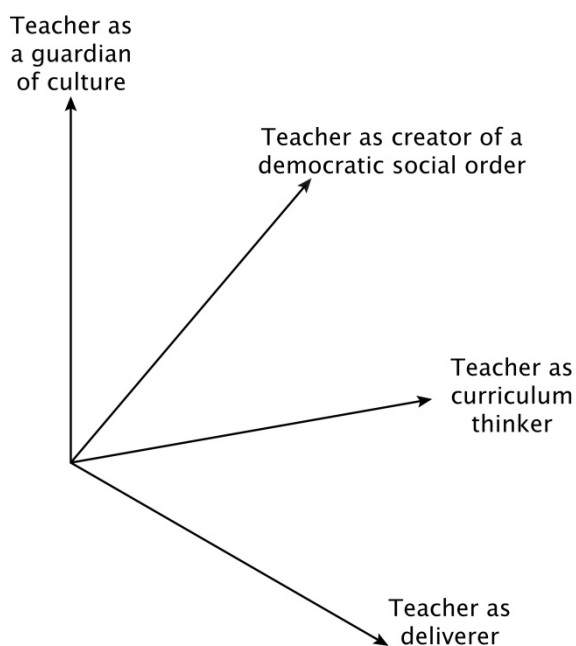


Figure 4 Different views of the teacher (Pring 2011)

Heikkinen et al. provide an alternative, but complementary, view of professional learning as consisting of four basic elements which are "tightly integrated with each other" (2011, p.97), illustrated in Figure 5.

Chapter 2: Literature review

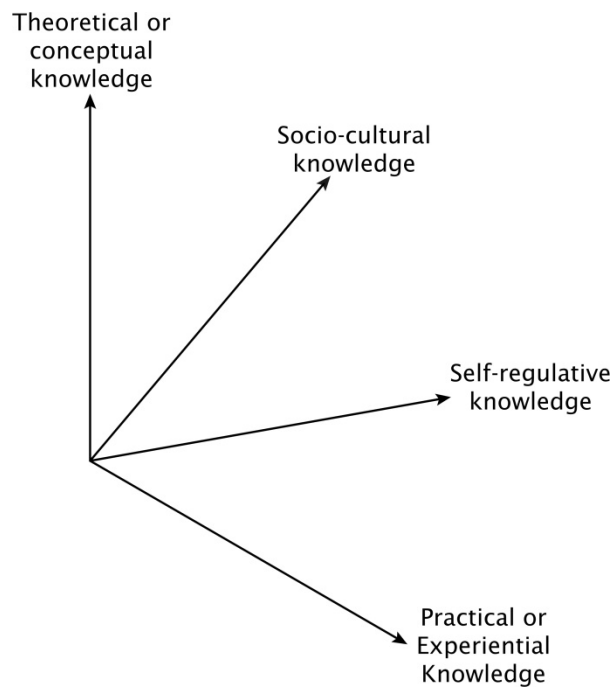


Figure 5 Heikkinen et al.'s (2011) model of professional learning

Considering these characterisations collectively provides a multi-faceted view of teacher professional learning, with each model expressing the required knowledge, skills and understanding in different ways. A quality variously labelled as problem solving (Heikkinen et al. 2011), critical dialogue (Ellis and McNicholl 2015), judgement (Furlong and Maynard 1995), professional judgement (Winch et al. 2013) and creativity (Beyer 1988) provides a means of decision-making for appropriate application of the qualities for all the models.

The complexity in teacher learning is expressed well by Olsen:

Teachers learn and develop by continuously stitching and restitching together in complex but identifiable ways their memories, moral and philosophical beliefs, personalities, goals, reasons for entering teaching and family/social experiences along with the professional knowledge, teaching contexts and colleagues and educational activities in which they are engaged (2014, p.89).

The final characterisation presented in this section is drawn from Winch et al. (2013) and shown three-dimensionally in Figure 6 where the axes are aspects of teachers' professional knowledge reflecting "something of the qualities that good teachers need" but "any one on its own is insufficient" (Winch et al. 2013, p.3).

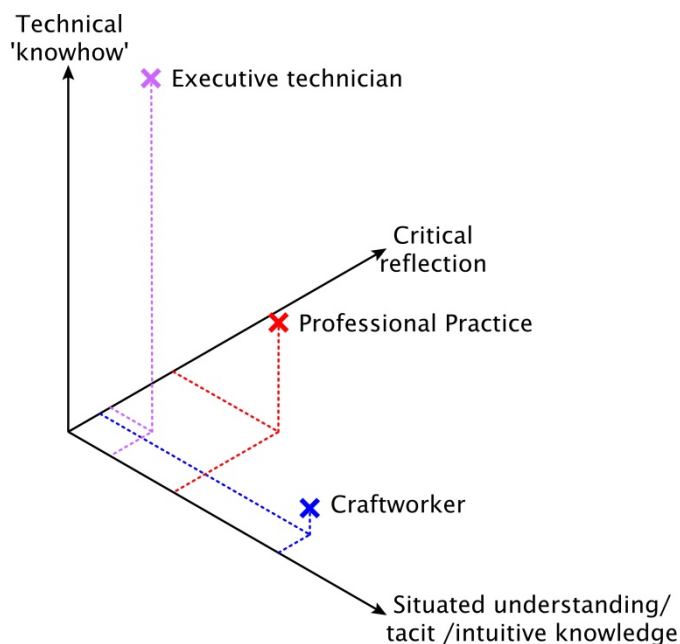


Figure 6 Winch et al.'s (2013) model of teacher qualities

The figure identifies how combining the different types of teacher professional knowledge in different proportions leads to different conceptions as to the nature of teaching. Getting the balance between the three wrong, say Winch et al., leads either to seeing the teacher as a craft worker (which “overplays the value of situated professional knowledge at the expense of technical knowhow and critical reflection” (2013, p.1) - faith in common sense and experience) or an executive technician (which “foregrounds the contribution of teachers’ technical knowledge of effective classroom practice at the expense of situated professional judgement” (*ibid.* p.1) - ‘what works’). Professional practice requires a balance and interplay of all three. Here, the discussion moves on to considering each of these three models of the teacher in more detail.

2.2.3 The teacher as craft worker

Viewing the teacher as craft worker is based on a conception of learning specific skills from a master by imitation in a workplace setting. It is predicated on teachers as:

craftspersons in so far as they plan actions aimed at achieving a pre-determined end, the success of which depends on their spontaneous responses to contextual factors and on the exercise of acquirable skills (Coldron and Smith 1999, p.716)

Chapter 2: Literature review

The craft view is based on the observable actions of a teacher, such as marking, directing, demonstrating, telling etc. but other aspects of teaching such as relationship-building and decision-making are under-acknowledged, so much of teaching is seen as unproblematic.

This approach has been popularised as ‘apprenticeship’, although this is not based on what those working in the field would consider as current and best practice. Researchers and teacher educators have been clear as to the flaws in the view teacher as craft worker. Edwards suggests that the craft worker conception is heavily reliant on the skill of the pre-service teacher in recognising what is being observed and suggests that such an approach may lead to teaching simply becoming “a craft with interesting local dialects” (Edwards 2014, p.58).

Lovat and McLeod criticise craft apprenticeship type routes for promoting a view of teaching as unproblematic and of teacher preparation as only needing to provide a few basic skills for early survival. They later raise a more philosophical concern suggesting that apprenticeship is suitable for work such as carpentry where “the common artefacts...are consistency and predictability” and contrast this with teachers “who deal with learners whose most common characteristic is difference” (Lovat and McLeod 2006, p.295). This view is further developed by Wringe who sees the focus of a craft as being an object that does not participate in the work or have aspirations of its own. However, he says that teachers “do not and cannot determine, and therefore cannot be ultimately held responsible for, the eventual outcomes of their professional activity” (Wringe 2012, p.9).

Other criticisms in the literature relate to the lack of space for reflection and for the sharing of experience with other beginning teachers (Lovat and McLeod 2006) and for what Hordern describes as being “inadequate recognition of the importance of institutions and social relations for arbitrating the value of knowledge and expertise” (2014, p.439). Without such experiences, beginning teachers are undertaking occupational socialisation (Beyer 1988;Evans 2010;Lawson 1983) rather than teacher preparation. Roth is clear that “on-the-job training is not characteristic of a professional” (1994, p.267) – a perspective developed more fully in section 2.8.1.

2.2.4 The teacher as executive technician

Winch et al.'s (2013) executive technician conception views teaching as reliant on technical expertise described as a set of procedures that, when followed 'correctly', will lead to 'success'. Value is put on identifying and then implementing 'what works'. Evidence of the popularity of this view in current English government policy can be found in the use of words such as 'training', 'provider' and 'delivery' and in Maguire's warning that "the teacher is being reconstructed as a state technician and trained by various 'providers' to 'deliver' a national curriculum" (2014, p.782). The first programme in England using an explicitly executive technician approach was launched by a private university in July 2017 (Hazell 2017). According to Hazell (2017) this programme describes itself as "the UK's first PGCE to focus on 'knowledge-based' secondary and primary school teaching"; a claim that I would suggest many teacher educators would find deeply insulting.

Beck (2009) claims that the executive technician approach teacher preparation has two main theoretical underpinnings: firstly, it draws selectively from management theory, and secondly, from that of behaviourism. Criticisms of this approach to teacher preparation relate to assumptions that teaching and learning are unproblematic (Beyer 1988; Coldron and Smith 1999) and lack of recognition of teaching as a developing body of knowledge (Wringe 2012).

Beyer (1988) asserts that views of the teacher as technician do not recognise the complexity and fluidity of the classroom environment; do not provide teachers with opportunities to experiment and develop as educators; and avoid critical engagement with issues. Wringe (2012) goes as far as describing this approach of learning procedures as "woefully inadequate" and Hordern that "it suggests that teachers cannot be trusted to make sound well-reasoned professional judgements" (2014, p.440).

Ellis and Orchard argue that such a technicist approach emphasising "procedures, clarity, transparency and application of rules" (2014, p.10) is inevitably highlighted when "teacher effectiveness is measured according to standards" (*ibid.* p.10). The defining of such standards has led to a competencies approach to teacher preparation, and is a defining feature of teacher preparation in England. As Biesta comments, a competency approach indicates "an important shift from what teachers should know to what they

Chapter 2: Literature review

should be able to do and, potentially even how they should be” (2015, p.3) [underlining in original]. As such, competencies can be seen as a logical extension to a technician approach.

An executive technician approach is based on performativity and defining behaviours (Beauchamp et al. 2015; Beck 2009; Biesta 2015; Furlong and Maynard 1995). However, competency approaches can be more nuanced than this, with Biesta (2015); Furlong and Maynard (1995); Jonsson and Mattsson (2011) suggesting an alternative definition focusing on the integration of knowledge, skills and understanding within a contextual setting. Aldridge, drawing on the work of Sen and Nussbaum (1993), posits the use of the word ‘capabilities’ to be “understood as those human accomplishments, promoted by deliberate thinking, that enable informed choices to be made and judicious action to be taken, particularly in unfamiliar or challenging circumstances” (Aldridge 2015, p.133).

Given that the use of competencies stems from the same epistemological approach as that of technicism, it is unsurprising that the criticisms levelled at it are similar. Both Hayes (1999) and Beck (2009) consider defining teaching as a series of discrete statements as insufficient and Biesta claims that “possession of competences may be a necessary condition for good teaching, but it can never be a sufficient condition” (2015, p.5). Maguire goes further, suggesting that the approach is “arguably one of teacher-proofing classroom practice” (2014, p.779).

2.2.5 The teacher as reflective practitioner

The general view in the literature surveyed in sections 2.2.3 and 2.2.4 is that teacher preparation is more than the learning of procedures and skills and that becoming a teacher requires a degree of education (to use Wringe’s 2012 terms). In the view of Laczko-Kerr and Berliner (2002) this is not possible if teacher preparation is solely undertaken in school-based practical experience. The argument is that teachers, as professionals, need other aspects to their preparation.

Much of the literature names this third conception of the teacher as the ‘reflective practitioner’. This is usually based on Schön’s (1983) work on

reflection as being a key attribute of professionals and his notions of reflection-on-action and reflection-in-action. Pring (2011) describes Dewey's notion of reflection as different to this, saying that it is about transforming experiences, the provision of further enrichment experiences and critical reflection. Dyke (2017) identifies having experiences different to our own as being vital to reflection. Furlong and Maynard (1995) connect Schön's reflection-in-action to the situatedness of the knowledge needed by teachers. What is commonly found in the literature (according to Taggart & Wilson, 2005) is a sense of there being levels of reflection, such as those identified by van Manen (1977) as technical rationality, practical action and critical reflection. As one progresses through these kinds of levelled models the reflection undertaken becomes more problem-oriented and more focused on ethical and moral aspects of education. Larrivee (2008, pp.342-343) suggests four levels of reflection. In brief, these are:

- Pre-reflection, where “teachers react to students and classroom situations automatically, without conscious consideration of alternative responses”;
- Surface reflection with a “focus on strategies and methods used to reach predetermined goals”;
- Pedagogical reflection using “the field’s knowledge base and current beliefs about what represents quality practices”;
- Critical reflection “on the moral and ethical implications and consequences of their classroom practices on students”.

As is often the case in the literature, here the discussion has been about reflective practice without consideration of what reflection actually means. Fortunately, useful elaborations are available with Téllez saying that “each specific school classroom and child “requires” deep, deliberate reflection on those acts that would foster successful educative experiences” (2007, p.553). van de Ven provides us with similar elaboration, suggesting the need to reflect on “one’s own educational practice, developing knowledge about the community, its ways of thinking, its ways of working at education, its stands and its D/discourse” (2011, p.205). Furlong and Maynard (1995) suggest that learning to reflect is a ‘habit of mind’ and is a commitment to critical examination of personal practice.

Chapter 2: Literature review

Unfortunately, developing pre-service teachers as reflective practitioners is not easy and Tomlinson offers us the challenging view that teachers themselves fail to “confirm the importance of reflection” (1999a, p.408). Furlong and Maynard (1995, p.44) caution that “asking students to confront deeper and more fundamental questions about their own teaching” does not necessarily make them better teachers. However, perhaps as teacher educators we tend to promote this approach as a learning tool for beginning teachers so that thinking can be articulated and shared with tutors and mentors. Mannikko-Barbutiu et al. remind us that becoming a teacher is a personal journey that includes “themes of enacting understandings, developing a teacher identity, revelations about teachers’ work, critical encounters and transformations in positioning in ideology” (2011, p.61).

It is also worth noting that in England, as well as in other parts of the world, teacher educators in universities in particular face a very considerable challenge in working to develop pre-service teachers as reflective practitioners within a tightly defined national regulatory system that promotes craft and technician approaches and where beginning teachers are measured against competencies.

2.2.6 Orientations to teacher learning and teacher preparation

Having examined the knowledge needed by the teacher, different characterisations as to the types of knowledge needed by teachers, and different models of the role of the teacher, the discussion moves on to consideration of how teachers learn professional knowledge. The work of Wise et al. on teacher evaluation considers there to be four conceptions of teaching: “craft, labour, profession or art” (1984, p.6) and Hoban (2002) uses Wise et al.’s work to argue that different conceptions of teaching lead to different understandings about teacher learning.

Buehl and Fives surveyed the beliefs of over 100 pre- and in-service teachers and found that most “do not recognise or value the specific knowledge that is unique and needed within the teaching profession” (2009, p.399). Those surveyed identified multiple sources of teaching knowledge including: formal teacher preparation, external bodies, authority figures, and “individual and social experiences and interactions” (*ibid.* p.399). Grossman (1990) suggests

that teachers learn from their apprenticeship of observation (see section 2.8.2 for further discussion regarding this concept), disciplinary background (i.e. subject knowledge learning), professional coursework (i.e. teacher preparation) and from experience.

With so many sources of learning, it is important to make sense of how these are drawn upon and how they interact, particularly as empirical work carried out by Bråten and Ferguson (2015), corroborating earlier work by Grossman (1990) and Tomlinson (1999b), found that pre-service teachers are more motivated to learn from teaching placement experience than the taught elements of their formal teacher preparation. The work of Tomlinson (1999a) is helpful in this regard in that he draws on work in the field of cognitive psychology to argue that learning a task involves an ‘interplay’ of both implicit and explicit learning that varies depending on individual context and circumstances. He says that people have two major forms of information processing: conscious serial processing, and tacit parallel processing. Conscious deliberative processing leads to learning more quickly but is slow to produce action, whereas tacit learning needs many attempts in order to learn but is rapidly drawn on in action. Considering the need for both types of information processing values tacit learning and does not treat implicit and explicit learning as dichotomous. Polanyi (1964) also urges us to value tacit knowledge, given that we may know more than we can articulate. Eraut makes a case for there being three different types of tacit knowledge: “tacit understanding of people and situation, routinised actions and the tacit rules that underpin intuitive decision-making” (2000, p.113). In his (2004) work, Eraut suggests that tacit knowledge is often used uncritically and that there is a “natural tendency to communicate the more explicit aspects” of a complex task “and to neglect those that are not” (*ibid.* p.254). His other argument (Eraut 2000) is that there are three modes of cognition; intuitive, analytic, and deliberative. The balance of these, he says, depends on a range of factors. Hence, tacit knowledge is a complex construct and difficult to articulate.

Eraut identifies all professional work as requiring “propositional knowledge, situational knowledge, professional experience and judgement” (2000, p.128). Of the three modes of cognition listed earlier he suggests that each has different requirements. The analytic approach requires research evidence, a problem posed in suitable terms and the practitioner willing and able to use

Chapter 2: Literature review

analytic tools to find a solution. The intuitive approach requires the practitioner to have considerable prior experience of similar situations to draw upon and the deliberative approach requires both some evidence and some experience with the practitioner willing to consult and reflect on the range of possibilities. Professional work and professional learning require the beginner to have a range of cognitive tools and the resources to support their use. This leads into the discussion in section 2.6 about theory and practice. It also leads into section 2.3 which considers the place and value of situated learning as a potential theoretical underpinning to teacher learning.

2.2.7 Teacher preparation

Sections 2.2.1, 2.2.2 and 2.2.6 support Cochran-Smith's view of teaching as "an intellectual, cultural and contextual activity that requires skilful decisions" (2004, p.298). In sections 2.2.1 and 2.2.2 teaching is also identified as a complex undertaking requiring different skills, types of knowledge and the exercise of judgement. Gore succinctly summarises the "primary purpose" of teacher preparation as being "the preparation of teachers who can help their own students achieve high-quality learning outcomes" (2001, p.127). The literature also has much to say about the complexity of the learning that therefore needs to be undertaken by pre-service teachers. For example, Bransford and Darling-Hammond identify eight 'core' concepts needed by beginning teachers: "learning; development; language; curriculum goals; teaching subject matter; teaching diverse learners; assessment; and classroom management" (2005, p.38). Additionally, Feiman-Nemser identifies five central tasks of teacher preparation as to:

- Analyse beliefs critically in relation to vision of good teaching;
- Develop subject knowledge matter for teaching;
- Develop an understanding of learners, learning and issues of diversity;
- Develop a beginning repertoire;
- Develop the tools and dispositions to study teaching (2001, p.1050).

Gore finds commonality in teacher preparation programmes through defining what she calls "four dimensions of classroom practice...intellectual quality, relevance, supportive classroom environment and recognition of difference" (2001, p.127). Where she finds divergence is in the emphasis from teacher

educators and suggests that there are four different approaches used emphasising:

- a strong background in the discipline one plans to teach;
- technical skills in teaching based on research;
- apprenticeship models and learning by doing; and
- critical consciousness of the inequitable impact of schooling on children from very different backgrounds and social circumstances.

This study focuses on the third of these and seeks to explore apprenticeship as a model for teacher preparation. With this in mind, the discussion moves on to consider situated learning, given its importance in apprenticeship.

2.3 Situated learning

Section 2.2.6 makes it clear that time spent in a school is a valued aspect of teacher preparation. If teacher preparation is to be seen as situated in the workplace, i.e. the classroom, then one might usefully look to research literature regarding workplace learning and situated learning for insights to apply to teacher preparation.

2.3.1 Situated learning theory

The development of situated learning as a theoretical approach is often attributed to Lave & Wenger (Brown et al. 1996; Fuller 2007; Hughes et al. 2007; Leonard 2002). However, Lave and Wenger's contribution was more specifically in developing situated learning as legitimate peripheral participation in communities of practice. Their work is best understood in the context in which it was written, which was as an alternative to the then prevailing model of learners as receptacles of taught knowledge and with learning as separate from the workplace (Fuller et al. 2005). Wenger's later work argues that situated learning is an attempt to place "learning in the context of our lived experience of participation in the world" (Wenger 2009, p.209).

Eraut (2009) describes the transfer of learning as complex with several steps. Billet's understanding of situated learning expresses the transfer of knowledge as taking place when higher order thinking "enables the abstraction of

Chapter 2: Literature review

principles from specific instances”(1994, p.113) and applies them to new situations. Lave and Wenger take the view that “learning is an integral and inseparable aspect of social practice” (1991, p.31), with Wenger’s (1998) work on communities of practice premised with an assertion that there are four components to a social theory of learning: meaning (experience); practice (doing); community (belonging); and identity (becoming). The argument from situated learning theorists is that knowledge cannot be decontextualized and must therefore be situated in order to be learnt (McLellan 1996). Brown et al. (1996) argue that the use of cognitive tools must be learnt in the community where they are to be used. Lave and Wenger take the argument further, suggesting that knowledge can *only* be learnt in situ: “...engaging in practice rather than being its object, may well be a condition for the effectiveness of learning” (Lave and Wenger 1991, p.93) [underlining in original] and “decontextualized learning activity is a “contradiction in terms” ” (Lave 1993, p.6). Lave further asserts that informal learning “in apprenticeship is so powerful and robust” (1996, p.150) that it brings into question the value of formal learning. Tripp (1996) describes situated learning approaches as considering knowledge not to exist apart from its application and Winn, supported by Reder et al. (1996), considers situated learning as “the only route to expertise” (Winn 1996, p.178), with Evans et al. (2006) suggesting that Lave and Wenger’s view is that learning is so specific that “transfer” has no meaning.

Lave & Wenger’s specific contribution to the development of understanding of situated learning describes a *community of practice* as “a set of relations among persons, activities, and world, over time and in relation with other tangential and overlapping communities of practice” (1991, p.98). Brown (2013) offers the additional perspective that, in a community of practice, learning is seen as belonging to the group. Li et al. chart the development of Wenger’s work on communities of practice and suggest that it is useful to focus on the key characteristics, which they consider to be “support for members interacting with each other, sharing knowledge and building a sense of belonging within networks/teams and groups” (2009, no page numbers).

Lave and Wenger also give us the concept of *legitimate peripheral participation*: an “analytical viewpoint on learning, a way of understanding learning” (1991, p.40) that “requires access to a wide range of ongoing activity,

old-timers, and other members of the community; and information, resources, and opportunities for participation” (*ibid.* p.101). Brown (2013) says learning is located in relationships. Further, Lave and Wenger consider the key to legitimate peripheral practice to be “access by newcomers to the community of practice and all that membership entails” (1991, p.100). Such a process allows for the journey from ‘newcomer’ to ‘old-timer’ (Lave and Wenger 1991).

Both the concepts of community of practice and of legitimate peripheral participation have been critiqued extensively. Fuller, for example, says that communities of practice tend to promote “continuity and reproduction rather than discontinuity and transformation” (2007, p.22). This point is also made by Eraut (2002) and Philpott (2014), although Wenger et al.’s (2002) work exploring communities of practice in business settings with highly skilled experienced employees provides a considerable number of counter examples to this criticism. Wenger et al.’s (2002) work implies that they view there to be some differences between the notion of community of practice for novices such as apprentices, and for those who are considered experts. Cairns (2011) uses the work of Edwards (2006) to explain that communities of practice need tight boundaries, that there is a lack of emphasis on language and that the concept does not explain how new things are learnt by a community. Regarding the last of these criticisms, one might point out that Wenger’s use of communities of practice was as a concept for the learning of individuals, so perhaps expecting the concept to extend to the learning of groups or teams in the workplace is an over-extension.

Apprenticeship as situated learning relies heavily on the concept of the novice learning from the expert. However, this is not always straightforward. Fuller (2007) suggests that there is an over-simplification of ‘experts’ and ‘novices’ and of the relationships between them and Billett states that this distinction requires there to be “well-structured knowledge-base” (1994, p.112) in the field. Evans et al. (2006) point out that having a novice and expert working together does not automatically imply that learning will take place and that the workplace needs to accept the novice into the community of practice. In modern workplaces the ‘easy’ dichotomy of ‘novice’ and expert’ may be less apparent than in the field studies of Lave & Wenger; Philpott (2014) makes a related point in suggesting that the concepts do not necessarily generalise to other occupations. Fuller’s argument is that Wenger fails to “specify the full

Chapter 2: Literature review

range of trajectories of participation by members” (Fuller 2007, p.51), how experts learn from novices and doesn’t “sufficiently recognise the implications of multiple settings and networks of relationship” (*ibid.* p.51). Gheradi et al. further suggest that aspects of the social relationship between master and novice such as style and arrangements determine “which events and situations will count as learning opportunities” (1998, p.23). Some of these issues are also probably related to complexities in the relationship between learning and employment in apprenticeship (Eraut 2002;Evans et al. 2006;Fuller et al. 2005). Both Evans et al. (2006) and Gheradi et al. (1998) find from their studies of workplaces that learning is not necessarily a linear process with Gheradi et al. characterising it as a “shuttling back and forth between areas of autonomy and dependency that can last a long time” (1998, p.19). Both Billett (1994) and Gheradi et al. (1998) as identify observing and listening as important learning activities in situated learning.

There is a good deal of criticism of situated learning in the literature. In a very specific example, Tripp (1996) critiques the approach from the perspective of adult second language learning. He offers words of caution, suggesting that a solely content-immersed experience might well lead to the acquisition of “truncated skills” (*ibid.* p.158) and believes that there is a role for “didactic classroom instruction at the early stages of learning any complex open skill” (*ibid.* p.158). Anderson et al. (1996) are critical of claims that knowledge transfer is not possible and that abstraction is of little use, asserting that good teaching is the key to both. Allix (2011) suggests that transfer is only likely to be successful between two situations possessing good deal of similarity in terms of features and properties. Billett raises his concern that a “totally informal learning process may lack the development of understanding” (1994, p.113) and that there is difficulty in making tacit and implicit knowledge observable. Evans et al. (2006);Fuller et al. (2005);P. Hodkinson and H. Hodkinson (2004);Iredale et al. (2013) and Philpott (2014) all identify a lack of recognition of the individual in terms of their biography, identity and disposition in Lave & Wenger’s work and Evans et al. also recognise that workplaces need to be “ready, willing and able to receive the learner” (2006, p.14). Eraut’s (2009) criticisms find that Lave & Wenger fail to recognise the need for individually situated knowledge as well as knowledge that is socially

situated and that they focus on commonalities rather than differences in people's knowledge.

Engeström (2007), following Fuller et al. (2005), offers another criticism whereby he says that Lave & Wenger's concepts work well for craft-learning but "run into trouble" when the tasks are more complex and changing. Holding a similar view, Reder et al. offer the view that complex tasks are best learnt through a combination of "training procedures involving whole tasks and component and individual training and training in social settings" (1996, p.10). As Evans et al. (2006), Philpott (2014) and Reder et al. (1996) assert, situated learning, and the work of Lave & Wenger, downplays the value of abstract learning and the role of formal education institutions and, as Fuller et al. (2005) express it, learning is seen as 'catching up with the experts'.

All this having been said, Collins argues that there are benefits to situated learning:

"students learn conditions for applying knowledge...
situations foster invention....
students see the implications of the knowledge....
context structures the knowledge appropriate to its uses" (1989, p.2).

These benefits are considerable, and require situated learning approaches to be considered to have value in these ways, and to offer a challenge to other approaches to provide these opportunities.

Arguments that all learning must be situated and therefore that learning cannot happen in a classroom are unconvincing. The heart of the debate is really about different understandings as to the nature of both learning and knowledge, a fundamental difference between cognitive and situated theories of learning, identified by Lave as "at heart a very deep epistemological one" (1993, p.12).

In summary, it seems that there is consensus suggesting that how and where learning occurs depends on the type of learning being undertaken (Eraut 2002; Reder et al. 1996; Tripp 1996). As both Evans et al. (2006) and Reder et al. (1996) suggest, Lave & Wenger's concepts are useful but their work has been over-extended beyond the boundaries of the original contexts and has therefore been found wanting. As Eraut proposes, "participation in a community of practice is a good way to learn" (2002, p.4) as long as it is not

Chapter 2: Literature review

seen as the only way to learn. Waring and Evans use Wenger's (2009) work, and that of others, to argue for an integrated approach one that "takes account of the most appropriate educational theory for consideration in a specific context" (Waring and Evans 2015, p.46-47). They further propose taking a judicial approach:

in determining what the different theories have to offer, their currency, and how they can be most usefully combined....relative to the specific needs and requirements of a learning situation (Waring and Evans 2015, p.47).

With this in mind, the discussion moves on to considering situated learning as a model for teacher preparation and the extent to which it applies, or contributes to, beginning teacher learning.

2.3.2 Situated learning as applied to teacher preparation

The previous section raised a number of concerns in some of the literature about situated learning. The focus here moves on to considering situated learning as a model for teacher preparation.

A 'strong' version of situated learning supports a view that becoming a teacher can only be learnt by being in a classroom teaching. As discussed in section 2.2.2, Wringe (2012) argues that teaching is 'procedure light and skill heavy'. It is clear from the arguments presented previously in this chapter that teaching is a complex activity; too much so for an entirely situated approach. Whilst seeing the 'learning curriculum unfold' (in Lave and Wenger's (1991) words) may be appropriate for some learning, it would seem to be less well-suited, for example, where regulatory professional entrance requirements specify evidence of certain competencies. It also suggests the luxury of time that is not available on an intensive one-year post graduate teacher preparation programme. Conway et al. (2014) suggest that what they describe as "sink or swim" models ultimately undermine teaching because they lead to teachers not developing a wide repertoire of skills (Beach and Bagley 2012; Muijs et al. 2014; Olsen 2014; Edwards and Protheroe 2004) applicable in a range of contexts. Edwards and Protheroe (2004) further raise concerns that opportunities to learn in school tend to be incidental rather than structured. These themes are developed in more detail in section 2.2.6 (regarding teacher

learning), sections 2.8.1 and 2.8.2 (apprenticeship as a model for teacher preparation) and throughout the data analysis and discussion.

Lave and Wenger also argue that newcomers need “broad access to areas of mature practice” (1991, p.118) in order to participate peripherally and legitimately. This might be difficult to provide in school-led preparation programmes where there are teacher shortages or where pre-service teachers have little opportunity to work with others; this is one concern raised in the Geographical Association (2015) report regarding teacher preparation.

A key feature of situated learning is that of peripheral participation. Lave and Wenger suggest that this requires:

less demands on time, effort and responsibility for work than for full participants. A newcomer’s tasks are short and simple, the costs of errors are small. The apprentice has little responsibility for the task overall (1991, p.118).

Wenger also lists “special assistance...close supervision or lessened production pressures” (1998, p.100) as ways in which peripheral participation can be effectively achieved. However, as Lortie (2002) notes, these are difficult in teacher preparation because beginning teachers participate fully in the job.

Philpott (2014) is highly critical of the application of communities of practice to teacher preparation. He suggests that teacher preparation lacks the necessary shared repertoire and mutual engagement necessary for a situated learning approach to be effective and that such an approach fails to “recognise the diversity of relationships and trajectories in complex working and learning situations (*ibid.* p.41). H. Hodkinson and P. Hodkinson (2004) find that the concept of communities of practice is too narrow to apply to teacher learning and that it implies more cohesion than is possible in a school context. In earlier work, (Hodkinson and Hodkinson 2003), they found that legitimate peripheral participation was not always the dominant or a necessary component of learning in a community of practice. Whilst their work is about teacher learning, it should be noted that the fieldwork concerned the learning of experienced teachers and perhaps this finding is indicative of extending the concept beyond that of novice learning. Wenger et al. (2002) do not use legitimate peripheral participation to any extent in their work about the

Chapter 2: Literature review

developing of knowledge in communities of experienced experts in businesses.

Whilst it is clear that there are limitations with situated learning as a model for teacher preparation, Korthagen (2010) argues for the recognition of its importance. He suggests that “all knowledge has its roots in practical situations and is socially constructed” (*ibid.* p.103) but that learning to teach also requires that knowledge to be de-situated from the specific situation in order to be applied in new contexts. As well as explicit knowledge, pre-service teachers need the tacit knowledge necessary for teaching and so it is appropriate for both Korthagen (2010) and Philpott (2014) to emphasise the role of situated approaches to learning.

Learning from experience is a key element of situated learning. Ellis and Orchard go as far as saying that the role that experience plays in learning to teach is “perhaps the central problem in policy making and professional practice” (2014, p.1) [underlining in original]. Grossman argues that learning from experience is not “as automatic nor as effortless as new teachers might like to believe” Grossman (1990, p.109) and that teacher preparation is necessary in order to provide a framework for this learning because without it “learning from experience can be haphazard, idiosyncratic and even misleading” (*ibid.* p.111). Jackson and Burch put this as “having an experience does not imply learning” (2015, p.10). Beyer supports this, suggesting that over-reliance on classroom experience in teacher preparation leads to:

duplication of existing procedures and activities that are both miseducative and ideologically suspect; such exposure, in any case, curtails or even opposes a critical foundational approach to teacher education (1988, p.195).

Such limited experiences lead potentially to maintenance of the status quo in schools (Beyer 1988), a focus on ‘what works’ (Grossman 1990) and replication of particular classroom practices (McNamara et al. 2014b). This lack of a “critical, foundational approach” leads to learning that is focused “around adjustment, containment and accommodation” (*ibid.* p.195).

2.4 Teacher identity

Development of identity is a key purpose in situated learning and Day and Kington define identity as “the way in which we make sense of ourselves to ourselves and the image of ourselves that we present to others” (2008, p.9). They summarise the literature in the field as finding that “identities are a shifting amalgam of personal biography, culture, social influence and institutional values which may change according to role and circumstance” (Day et al. 2006, p.613). Teacher identity is not fixed, stable (Edwards 2010) or internally coherent (Varghese et al. 2005), but it is dynamic (Chong et al. 2011; Thomas and Beauchamp 2007) and formed through social histories and emotional responses (Olsen 2008). Identity is not a singular concept and Day and Kington (2008) identify it as having three dimensions: professional, situated, and personal. The professional factor “reflects social and policy expectations of what a good teacher is and the educational ideals of the teacher” and may have a number of elements including “local or national policy, continued professional development (CPD), workload, roles and responsibilities, etc.” (*ibid.* p.11). The situated factor is “located in a specific school and context” and “affected by local conditions....leadership, support and feedback” (*ibid.* p.11). Beijaard et al. consider the formation of professional identity as drawing on “many knowledge sources, such as knowledge of affect, teaching, human relations, and subject matter” (2004, p.114) and that “teachers have to be active in the process” (*ibid.* p.122). Evans et al. find that it is:

facilitated by such practices as engaging in ‘learning conversation’ and hearing ‘war stories’, voicing (articulating) developing understandings to others, being stretched through opportunities to work at the next level (2011, p.157).

One way identity can be extended is through boundary crossing (Fuller and Unwin 2008). That the boundary referred to can be between physical locations is confirmed by Evans et al. who suggest that expansive practise for the learning of experienced teachers offers the “opportunity to extend professional identity through boundary-crossing into other departments, school activities and schools” (2006, p.53). For pre-service teachers the implication is that for identity to develop they need opportunities to engage in these other contexts.

Chapter 2: Literature review

For those on employment-led routes who are required to have previous work history they are also crossing a boundary from their previous work identity to develop a new teacher identity and undergoing a role-shift from “being a non-teacher to being a teacher” (Hobson et al. 2008, p.416). Akkerman and Bakker review the literature in the field finding “four potential learning mechanisms that can take place at boundaries: identification, coordination, reflection and transformation” (2006, p.132). These are used in the analysis of the data collected in this study in section 6.2.5.

2.5 Self-efficacy

In section 2.2.7 Gore is cited as summarising the “primary purpose” of teacher preparation as being “the preparation of teachers who can help their own students achieve high-quality learning outcomes” (2001, p.127). In this section, connections between teacher behaviours and student outcomes are explored through the construct of self-efficacy.

Within the field of motivational psychology, Hattie and Yates (2014) suggest that there are three distinct levels of confidence. They describe these as the “a) global level of *self-esteem* b) domain level of perceived *competency* and c) task related level, often called *self-efficacy*” (*ibid.* p.219) [italics in the original]. This task-related level of confidence is the focus of this section. Both Fives (2003) and Tschannen-Moran and Woolfolk Hoy (2001) identify work on teacher efficacy as originating in research from the RAND corporation, published in 1976, based on Rotter’s (1966) theory of locus of control and social learning theory. At the same time, Bandura was developing work on self-efficacy based on his social cognitive theory (Fives 2003; Tschannen-Moran and Woolfolk Hoy 2001). Hence, Fives describes development in the field as “derived from two separate lines of research” (2003, p.5) and Tschannen-Moran and Woolfolk Hoy (2001) indicate that there are two separate conceptual strands in teacher efficacy research.

2.5.1 Self-efficacy as a construct

Bandura’s (1997) theory of self-efficacy arose out of his work on social cognitive theory. This epistemological approach sees people as “proactive, aspiring organisers who have a hand in shaping their own lives and the social

systems that organise, guide and regulate the affairs of their society” (Bandura 1997, p.vii). Personal agency therefore plays a key role and Bandura goes on to say that “among the mechanisms of agency, none is more central or pervasive than beliefs of personal efficacy” (1997, p.2). One can see the logic in an argument that says that beliefs shape behaviour and influence success in a range of ways, providing the impetus to work at a range of tasks to improve one’s performance and promote change (Klassen and Usher 2010).

Self-efficacy is defined by Bandura as the belief in one’s own capabilities to organise and execute the courses of action required to accomplish a task or goal. Woolfolk Hoy and Burke-Spero describe it as a “future oriented judgement that has to do with perceptions of confidence rather than actual competence” (2005, p.343) and Hattie and Yates as “an actual judgement made in real time....your expectancy that you will cope well with the task you can see” (2014, p.219). Important distinctions need to be made between self-efficacy and outcome expectations and Bandura makes this clear:

Perceived self-efficacy is a judgement of one’s ability to organise and execute given types of performances, whereas an outcome expectation is a judgement of the likely consequences such performances will produce (1997, p.21).

Bandura (1997) suggests four sources of self-efficacy information: mastery experiences indicating capability; vicarious experiences where competencies are transmitted and attainment compared with that of others; verbal persuasion of competencies; and physiological and affective states which people use to judge their ability to perform. He further hypothesises that individuals integrate information informing their self-efficacy judgements in a variety of ways: additive (where efficacy beliefs are enhanced); relative (where sources have different strengths); multiplicative (where the sources interact) and configurative (where one source depends on others). Bandura’s (1997) sources of self-efficacy have clear connections with the learning experiences undertaken by pre-service teachers, for example, through their supported experiences teaching on school placement (mastery), the observations they make of other teachers (vicarious), mentor feedback (verbal persuasion) and personal reflection (personal judgement based on physiological and affective states). Hence it serves as a possible model for exploring aspects of teacher preparation. Pajares (1995) suggests that there are three ways in which self-

Chapter 2: Literature review

efficacy beliefs influence behaviour: through choice of behaviour, in that “people engage in tasks in which they feel competent and confident” (Pajares 1995, p.43); through the degree of effort people are prepared to put into a task; and because “self-efficacy beliefs influence individuals’ thought patterns and emotional reactions” (*ibid.* p.43). The next section considers the link between teacher self-efficacy and teacher behaviour and the following section the connections from teacher behaviour and self-efficacy to student outcomes.

2.5.2 Teacher self-efficacy and teacher behaviours

Many of the features of effective teaching identified in the literature (Ko and Sammons 2013) are also those which research reveals are features of a teacher with high self-efficacy. The importance of self-efficacy with regard to desirable teacher behaviours is demonstrated by Hattie and Yates who suggest four immediate outcomes for those who score highly in this regard:

- a) a willingness to undertake the task when known to be difficult, b) mobilisation of available effortful resources to match the perceived difficulty level, c) a willingness to increase effortful responses in response to set facts, and d) the person’s attentional focus shifts onto the demands of the task rather than dwelling on personal or emotional reactions (2014, p.220).

Muijs and Reynolds (2011) point to the connection from self-efficacy through to effective teaching via teacher beliefs (of which self-efficacy is one component). Beliefs change teacher behaviour and this behaviour influences student achievement (Muijs and Reynolds 2002). Redmon articulates this well, stating: “Teacher self-efficacy is more than a frame of mind; from it emerges many of the most critical dispositions that guide teaching behaviours and separate exemplary teachers from the rest” (2007, p.14). The work of Woolfolk Hoy and Burke-Spero (2005) uses a number of other studies to make claims as to the association between teacher self-efficacy and desirable attributes required by teachers. These include:

<i>Student motivation</i>	Woolfolk Hoy and Burke-Spero (2005) cite research by Midgely, Feldlaufer & Eccles in 1989 suggesting that “teachers’ sense of efficacy has been associated with other student outcomes such as
---------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	motivation” (Woolfolk Hoy and Burke-Spero 2005, p.344).
<i>Teacher effort, level of aspiration and goals</i>	Woolfolk Hoy and Burke-Spero (2005) do not provide any specific evidence for this claim.
<i>Planning, organisation and enthusiasm</i>	The work of Allinder (1994) reveals that those with higher levels of self-efficacy “exhibit greater levels of planning, organisation and enthusiasm” (Woolfolk Hoy and Burke-Spero 2005, p.345)
<i>Openness to new ideas, more willing to experiment, more committed</i>	Those teachers with higher levels of self-efficacy were “less critical of students who make errors” (Ashton & Webb, 1986 cited in Woolfolk Hoy & Burke-Spero, 2005, p.345)

The importance of self-efficacy to teacher behaviour is summarised by Bandura:

Teachers who believe strongly in their ability to promote learning create mastery experiences for their students, but those beset with self-doubts about their instructional efficacy construct classroom environments that are likely to undermine students’ judgements of their abilities and their cognitive development (1997, p.241).

He goes on to cite Cohn and Rossmiller (1987) saying “The less time spent on academic instruction, the lower the students’ academic progress” (Bandura 1997, p.241), and that Melby (1995) reveals “teachers with a low sense of efficacy are mired in classroom problems” (Bandura 1997, p.241), providing further evidence that teacher self-efficacy is an indicator of the kinds of behaviours one would expect to be demonstrated by effective teachers. Work by Heneman et al. provides support for this broad conclusion in that “teachers’ sense of efficacy was positively related to teacher performance controlling for teacher experience” (2006, p.12) and Henson et al. offer a further endorsement reporting “one of the best documented attributes of effective teachers is a strong sense of efficacy” (2001, p.404).

However, whilst literature concerning the concept of self-efficacy, and that specifically about teacher self-efficacy, suggests self-efficacy plays an important role in determining teacher effectiveness some caution should be

Chapter 2: Literature review

exercised. As Muijs et al. observe, “higher levels of self-efficacy” are a “necessary but not sufficient condition for effective teaching” (2012, p.34). This claim is supported by Ashton & Webb’s finding that “high efficacy attitudes made teaching and learning more likely, but did not guarantee that learning would take place” (1986, p.81). Also of importance is to consider how far self-reported beliefs, such as self-efficacy, and actual ability are aligned. Hattie and Yates argue that these are “far from being perfectly aligned” (2014, p.220). However, it is not clear on what research their claims are based so the argument is difficult to follow further. Settlage et al. (2009) use their own empirical work investigating the self-efficacy of pre-service elementary teachers regarding the teaching of science to raise cautions about the use of self-efficacy scores. They found that pre-service teachers defined effective teaching in terms of engagement and entertainment, rather than learning, and that their participants had over-inflated opinions as to their own self-efficacy. Their arguments further relate to whether high self-efficacy indicates ‘unconscious incompetence’ and the degree to which self-awareness and self-doubt might serve as a motivator for teacher development.

2.5.3 Teacher self-efficacy and student attainment

An argument that has received considerable attention in the literature is a link from teacher self-efficacy through teacher behaviour to student behaviour and finally from there to student outcomes and performance. Ross describes this link as an “extended causal chain” (1992, p.52). Arguments for the existence of such connections are made by a number of researchers (Guo et al. 2012; Klassen et al. 2011; Shaughnessy 2004; Ashton and Webb 1986).

Tschannen-Moran and Woolfolk Hoy (2001) cite several somewhat dated studies that support a relationship between student outcomes and teacher self-efficacy. The three studies mentioned are also cited by a number of researchers as evidence linking high levels of teacher self-efficacy with improved student outcomes. Using a two-item measure of self-efficacy based on Rotter’s (1966) locus of control theory, Ashton and Webb conclude: “Our findings strongly support the hypothesis that teachers’ sense of efficacy is related to student achievement” (1986, p.138). A second study, using the same measure, by Armour et al., claims a “strongly and significantly related” finding that “the more efficacious the teachers felt, the more their students advanced

in reading and achievement” (1976, p.23). Finally, Ross (1992), using Gibson & Dembo’s (1984) Teacher Efficacy Scale, also reports that achievement is higher for students taught by teachers with high self-efficacy beliefs. Caution ought to be exercised when making claims with the findings of this third study, in particular, given that Tschannen-Moran and Woolfolk Hoy (2001) argue extensively that there are inconsistencies with the Gibson & Dembo scale and that it has conceptual and statistical difficulties within its two factor design. Other studies outline similar findings that collectively build a strong case for teacher self-efficacy being related to student attainment. For example, Muijs and Reynolds reference a number of papers linking teacher self-efficacy to student outcomes whereby “students with teachers who score highly on self-efficacy did better on standardised tests than did their peers who are taught by teachers with low self-efficacy beliefs” (2011, p.93).

However, the situation is not so clear cut and, in some cases, care needs to be taken explaining the supporting literature cited. For example, Fox and Peters state that “teacher self-efficacy levels have a direct relationship to student learning and performance” (2013, p.2) and reference three studies in support of this claim. Regarding this supporting evidence, however, the study by Wayne and Youngs (2003) does not contain the word “efficacy”, the one from Ballou and Podgursky (2000) neither directly supports this claim, nor has a closely related focus, and the third, a research review on teacher quality and student achievement (Goe and Stickler 2008), also does not directly provide support for this claim. Fox and Peters also state that “teacher self-efficacy influences teacher effectiveness” (2013, p.2) with reference to the work of Flores et al. (2004), which does not contain the word “effectiveness” in its conclusion in the sense of “teacher effectiveness” and whose paper is centred on comparing teacher preparation routes.

Whilst there are studies supporting a direct connection between teacher self-efficacy and student achievement, many of these are very specific in the scope of their findings. For example, Anderson et al. (1988), cited in Klassen et al. (2011), find teacher self-efficacy is “related to student performance on standardised achievement tests for grade 3 students; but not for grade 6 students” (Klassen et al. 2011, p.37). Armor et al. (1976) specifically report the reading gains for minority grade six students in schools in low income inner city neighbourhoods, whilst Ross (1992) examines grade seven and eight

Chapter 2: Literature review

history teachers and the effect of coaching on these teachers and Allinder's (1994) study involved special needs students and their teachers, whereas Guo et al. are specific in their findings that "teacher self-efficacy was a significant and positive predictor of fifth grade literacy outcomes" (2012, p.17). It is therefore possible to make some statements about teacher self-efficacy and student attainment, along the lines of Muijs and Reynolds (2011) but not to generalise.

Approaching the literature in this way is supported by Klassen et al.'s review of teacher efficacy research which finds that "the connection between teachers' efficacy and student outcomes is not as strong as it is assumed by most researchers" (2011, p.40). This claim is not made on the basis that the link has been found to be weak, but that only 0.09% of the studies they reviewed examined this area. However, since Klassen et al.'s (2011) work was published, Fackler and Malmberg (2016) have published findings using a very large sample of almost 45,000 teachers from 14 countries in the OCED (this excludes England which did not take part). They are unequivocal from their analysis that "student achievement and TSE [teacher self-efficacy] are linked with one another" (Fackler and Malmberg 2016, p.193), although they caution that the data was collected using a general measure of TSE.

Ashton and Webb (1986) note that teachers do not generally define their effectiveness based on test scores. Overall, there is evidence for a broad claim that teacher self-efficacy is associated directly with student outcomes, principally based on the work of Fackler and Malmberg (2016). With some caution, this aforementioned "causal chain" is used in this study whereby measuring teacher self-efficacy offers a measure of teacher effectiveness.

Section 2.2 concluded by suggesting that there are multiple sources of teacher knowledge and that these are learnt through interplay of explicit and implicit learning. Section 2.3.1 concluded that aspects of situated learning have value but that one should take an integrated view and make a judicious choice of learning theory to support the requirements of a learning situation (Waring and Evans 2015). In the context of teacher preparation, the integrated view and judicious choices need to provide meaningful coherence between what are commonly labelled 'theory' (explicit learning) and 'practice' (implicit learning). This forms the focus of the next section.

2.6 Theory and practice in teacher preparation

Much of the literature reflects a sense of opposition between contrasting approaches to pre-service initial teacher education (Zeichner and Ndimande 2008) with Hutchinson describing teacher education as “characterised by difference and contradictions between different perspectives” (2011, p.178). This debate is an exemplification of a key dilemma underpinning teacher education about the relative importance of, and relationship between, theory and practice and often characterised as the university and the school being at odds with one another.

2.6.1 The role of ‘theory’ in teacher preparation

It is clear that much difficulty is caused due to a lack of clarity as to what is meant by ‘theory’ and by different stakeholders using different interpretations for the term. Pring provides us with a ‘classic’ definition saying that it “refers to a set of propositions which are stated with sufficient generality yet precision that they explain the ‘behaviour’ of a range of phenomena and predict what would happen in the future” (2004, p.127). However, this positivist definition is difficult to apply in educational settings where there are a range of factors that introduce complexity and variation into the learning situation. Orchard and Winch identify the theory required by teachers as including “i) conceptual knowledge, ii) knowledge of empirical research, and iii) a developed capacity for ethical deliberation” (2015, p.5) and view theory as enabling reliable professional judgements to be made on a day-to-day basis. Such a definition makes theory valuable to the beginning teacher.

Emsheimer and Ljunggren de Silva supported by Smith and Hodson (2010), find that pre-service teachers see theory as “a set of ideas they would be able to carry in the pocket and take out when needed in certain situations” (Emsheimer and Ljunggren de Silva 2011, p.161). Many pre-service teachers consider ‘theory’ as all aspects their preparation programme that are not directly ‘practice’ (Hodson et al. 2012) or as the part of their preparation that takes place in the university setting (Sjølie 2014). van de Ven’s view of theory and practice is as two different discourses with “two different languages and with different perspectives on teaching and learning, education and teacher education” (2011, p.199). However, the two discourses have the same object

Chapter 2: Literature review

and, as Thomson expresses, they are inextricably linked, “any practice is saturated with theory and any theory is muddled with implied practice” (2000, p.69). Wringe clearly puts views of teaching as atheoretical in their place: “no practical activity can be rationally carried out at all without some theory regarding the activity’s goals or the empirical conditions of its successful performance” (2012, p.2). This view is supported by Pring who notes that “individual teachers could be said to have a great deal of theory implicit in their practice” (2004, p.128) and that “no practice stands outside a theoretical framework” (*ibid.* p.129). Eraut offers a valuable perspective on the nature of the difficulty: “most components of a practitioner’s theoretical repertoire remain dormant until triggered by a very specific aspect of the situation” (2009, p.79). This ‘dormancy’ would go some way in explaining why, in the short term, practice is valued over theory.

For university teacher educators is it inevitable that, with these sorts of understandings, what they teach becomes seen as the ‘theory’ with which pre-service teachers have difficulties. Lortie’s (2002) apprenticeship of observation has the effect that many pre-service teachers see the ‘product’ of teaching with little realisation or appreciation of the ‘behind the scenes’ activities of the teacher and without access to the reasoning of the teacher. Jackson and Burch describe this sense of the easier teaching looks, the more skilled the practitioner is, as “one of the great deceptions of teaching” (2015, p.4).

As a teacher educator I do not consider that all my teaching is theory using either Pring’s (2004) definition, or Korthagen’s definition of theory as “empirically based generalised abstractions from practical situations” (2001, p.12). Much of my teaching draws on pedagogical research and practice in my curriculum field, as well as on more ‘classical’ aspects such as learning theories and the disciplines of education. However, much of it I would consider to be ‘practical’ in nature, given that it might be about how to carry out some of the common tasks of a teacher, or exploration of a suitable learning task for the classroom and it might involve discussion, video, tasks and other activities for pre-service teachers. By the very nature of teaching a group of pre-service teachers from different backgrounds who are in different placements, without pupils being present, what I do is not going to meet the expectations of ‘practice’ as some pre-service teachers see it.

2.6.2 The difficult relationship between theory and practice

Some of the more recent literature (Florian and Pantic 2013;Tatto 2013) makes compelling arguments about the necessity of the involvement of universities in initial teacher education on the basis of what Furlong et al. describe as the “essential contributions....consideration of research, theory and critique” (2008, p.317). Allen and Peach describe balancing the two as a “major and long standing challenge” (2007, p.23) and the issue as “neither minor nor benign” (*ibid.* p.33). This relationship is often considered to be a ‘gap’ (Emsheimer and Ljunggren de Silva 2011;Hargreaves 2007;Hedegaard-Sorensen and Tefler 2011;Korthagen et al. 2001;Rorrison 2011;van de Ven 2011).

A number of good reasons are suggested as contributing to this state of affairs. Cheng et al. summarise the literature as finding that “student teachers’ prior experiences and beliefs influence what is learned” and that “pre-training experiences are a barrier” (2010, p.94). Knight supports this with his empirical findings that, prior to teacher preparation, pre-service teachers viewed the university as “merely...the provider of ‘background information’ ... ‘basics’ and ‘pointers’ ” (2015, p.151). Allen, supported by both Evans (2010) and Feiman-Nemser (2001), points to the “tendency of pre-service teachers to privilege practice observed and experienced in the classroom over theory taught on campuses” (Allen 2009, p.647). However, Knight’s (2015) findings suggest that this is not necessarily the case.

Korthagen et al. (2001) suggest difficulties with the place of theory in initial teacher education in relation to the preconceptions of pre-service teachers, the timing of theoretical input into programmes, the nature of theory and practice and the socialisation effects of placement experiences. Emsheimer and Ljunggren de Silva (2011) report work from Kvernbekk (2001) as finding that pre-service teachers tend to draw incorrect conclusions from cause and effect, have difficulties with the nature of theory because they view it as representing universal truth and that their “limited experience....makes it difficult to induce appropriate theoretical awareness” (Emsheimer and Ljunggren de Silva 2011, p.152). Emsheimer and Ljunggren de Silva (2011), along with Allen and Peach (2007), assert that pre-service teachers have difficulties connecting theory and practice and that their ability to relate the two is “not very dynamic”

Chapter 2: Literature review

(Emsheimer and Ljunggren de Silva 2011, p.165). Hence, pre-service teachers have been found to value their school placement experience more than their university learning (Smith and Hodson 2010). Smith and Hodson go on to assert that pre-service teachers have a utilitarian view of theory, and place most value on theory when it is applied to their own context.

2.6.3 'Theory' as an effective force in teacher preparation

In part the problem is one of understanding as to the nature and purpose of 'theory' in teacher education. Moves towards school-led teacher preparation following a craft-oriented model in England, and elsewhere, provide impetus for teacher educators to redefine their role and to re-assert and to justify the unique nature of their contribution to teacher preparation. As Kelly says, unless we ensure that teacher preparation retains a theoretical element "we reduce teaching to the status of quackery and anecdotal superstition" (2015, no page numbers).

The literature suggests three elements to redefining the role of theory. Firstly, that theory and practice be seen as the joint responsibility of university-based teacher educators and school mentors (Darling-Hammond 2014;Heikkinen et al. 2011;Sloat et al. 2014;Smith and Hodson 2010;Thomson 2000). This would reduce the 'institutional separation' noted by Pring (2004). Secondly, that theory is reconceptualised so that it is seen as "cutting edge analytical engagement with new situations" (Hodson et al. 2012, p.181). Thirdly, that theory is managed so that it is "meaningful for understanding and improving for thinking and actions" (van de Ven, 2011, p.205; see also Knight 2015), and integrated and responsive (Hodson et al. 2012). Knight describes the role of Higher Education Institutions, therefore, as being to create a space "in which to problematize practice through exposure to challenging questions, wider perspectives and de-familiarising experiences" (2015, p.158).

Hodson et al. (2012) suggest that theory then has value as a reference point and as an aid to thinking. Time spent in what pre-service teachers consider to be the 'theoretical' part of their preparation programme becomes time to reflect and generalise thinking (Hodson et al. 2012;Sloat et al. 2014) and to mediate between theory and practice through problem solving (Heikkinen et al. 2011). Hodson et al. (2012) see this approach as providing those pre-service

teachers who are on school-led programmes based in a single school setting with opportunities to develop necessary generic skills applicable in other contexts.

Smith and Hodson (2010) call this shift in emphasis ‘practical theorising’. They say that, in this model, evaluation is “built into the interactive exchanges with trainees” (p.250) [underlining in original]. This connects well with Darling-Hammond’s call to:

Integrate newly emerging pedagogies – such as close analysis of learning and teaching, case methods, performance assessment and action research – that link theory and practice in ways that theorize practice and make formal learning practical (2014, pp.550-1).

Ellis and McNicholl’s (2015) suggestion that it is important to see practice as “being ‘in motion’ ” also connects well with a practical theorising approach. Aldridge (2015) expresses this ‘solution’ to the theory/practice gap in a different, but complementary, way. He says that theory is best viewed as ontology rather than epistemology as this then turns “the attention towards how students are transformed in the educational event” (Aldridge 2015, p.118).

A practical theorising approach needs to recognise and work with the complex relationship between theory (however it is defined) and practice (Hedegaard-Sorensen and Tefler 2011; Tom 1997). Those who work with pre-service teachers need to recognise that the learning experience is different for individuals (Smith and Hodson 2010) and that, for those on school-led programmes, there is considerable complexity related to being both ‘worker and learner’ (Allen and Peach 2007; Smith and Hodson 2010).

The timing and sequencing of theoretical and practical input in teacher preparation deserves a brief mention here. There are three possibilities (Emsheimer and Ljunggren de Silva 2011, p.150): theory first, practice first or “theories for direct application”. Korthagen et al. (2001) favour the second option in their model of ‘realistic teacher education’ as they say that it allows for meaningful engagement with theory. Tom identifies that pre-service teachers have difficulty with the first model because it is hard for them to ‘stockpile’ “pedagogical knowledge for subsequent application to practice” (1997, p.140). Knight (2015) found that primary pre-service teachers had a

Chapter 2: Literature review

developing approach to theory consisting of three overlapping and additive stages:

1. Theory as knowledge to be applied in practice
2. Theory as a way of making sense of practice
3. Theory as a tool for critical thought

These stages provide a more nuanced approach as to how the interplay between theory and practice might be seen to develop across the preparation experiences of a pre-service teacher. Brown et al's (2016) study also found evidence that in the latter part of their preparation programme pre-service teachers began to value the theory and critique they learned at university.

2.7 Mentoring in teacher preparation

In chapter 1 teacher preparation is clearly identified as being physically located in both the university and the workplace (i.e. school). Sections 1.4.3 and 1.4.4 explain that time spent in school is a major component in teacher preparation programmes in England particularly for those on employment-led teacher preparation programmes, such as the one under consideration in this study. Support in school for pre-service teachers is provided by a practising teacher, called a mentor, supervising, or cooperating teacher, and the role undertaken by this person can vary (Ambrosetti and Dekkers 2010; Christie et al. 2004).

The word 'mentor' is generally used for those for whom supporting pre-service teachers includes an educative element (Christie et al. 2004). This is the role in English teacher preparation; although it should be noted that In England the role generally includes assessment and feedback as well as supervision, facilitation and support. In a view supporting Feiman-Nemser (2001), Jones and Straker (2006, p.181) point out, mentors have roles as 'mediators', 'moderators' and 'facilitators' and are both "assessor and judge over who will be deemed competent enough to join the profession and who will be failed" (*ibid.* p.182). In their review of the literature, Hobson et al. provide a helpful definition of mentoring in teacher preparation, which applies well to the English understanding of the term, as:

as the one-to-one support of a novice or less experienced practitioner (mentee) by a more experienced practitioner (mentor), designed primarily to assist the development of the mentee's expertise and to facilitate their induction into the culture of the profession (in this case,

teaching) and into the specific local context (here, the school or college) (2009a, p.207).

Some of the literature identifies mentoring as both a relationship and a process (Ambrosetti and Dekkers 2010;Kwan and Lopez-Real 2010). McIntyre and Hagger (1993) suggest four models of mentoring, dependent on the level of teacher expertise drawn on:

- ‘Zero’ mentoring is generic and non-teaching specific;
- ‘Minimal’ mentoring where support is provided for learning through practice and assistance in planning and implementing lessons;
- ‘Developed’ mentoring makes use of teachers’ expertise through use of collaborative teaching, the sharing of craft knowledge, discussing ideas and managing the mentee’s learning opportunities;
- ‘Extended’ mentoring takes these further to develop learning beyond competence, in the whole school context and draws on sources of knowledge outside the school.

These models of mentoring are revisited later in the data analysis in section 6.7.

That mentoring in teacher preparation is of both importance and concern is evident in the volume of literature on the subject (Hobson et al. 2009b). When they feel that they receive good support pre-service teachers report mentoring as having a positive impact on their teaching (Griffiths 2007;Hobson et al. 2009a). Part of the role of the mentor is to support mentees in socialisation into the school (Hobson et al. 2009a;Smith and Avetisian 2011) and to mediate between them and the established groups and practices in the school (Jones and Straker 2006). Good rapport between mentor and mentee supports pre-service teacher development (Hudson and Millwater 2008).

However, the mentor relationship is not always easy (Hobson et al. 2009b) and there is also wide variation in the experiences of pre-service teachers (Hobson et al. 2009a). The sorts of difficulties reported in the literature include: lack of time for mentoring (Hobson et al. 2009b;Griffiths 2007;Jones and Straker 2006); a reluctance on the part of mentors to allow mentees to teach (*ibid.*); a lack of understanding of what the role involves (Griffiths 2007);

Chapter 2: Literature review

communication difficulties (Bradbury and Koballa 2008; Hudson and Millwater 2008); lack of training for mentors (Koc 2012); lack of flexibility and variety on the part of the mentor (Crasborn et al. 2011); differences between mentor and mentee regarding conceptions of mentoring and of beliefs about teaching (Bradbury and Koballa 2008). The dual role of the mentor as supporter and assessor and the power imbalance between mentor and mentee are also identified as challenges (Hudson and Millwater 2008; Jones and Straker 2006). Hobson et al. (2009b) found that those who had problematic relationships with their mentors sought informal support from others in their placement school.

There is less written about the experiences regarding mentoring of those who followed non-traditional teacher preparation programmes (i.e. those that are school- or employment-led). However, on an employment-led route there is added complexity in that mentors need to distinguish between the needs of the pre-service teacher and the goals of the school (Jones and Straker 2006). Hobson et al. (2009b) found that those who had followed school-led teacher preparation programmes tended rate the support they received from their mentors more highly than those who had followed other types of preparation programmes. However, Hutchings et al. (2006) found a wide variation in the views of Teach First teachers as to the effectiveness of their subject mentors; Griffiths (2007) reported similar findings for primary pre-service teachers on an employment-led route. McConney et al.'s review of literature about Teach for All programmes found that some mentors did not understand what they were to do, or had insufficient time or skills to mentor properly.

That mentoring is complex and fraught with difficulties is clear. However, Crasborn et al. provide us with an important reminder of the way forward when they assert that they “believe that there is no single approach to mentoring that will work in the same way for every student in every context” (2011, p.329), an approach that fits well with an ‘educative mentoring’ approach (Feiman-Nemser 2006).

2.8 Teacher preparation, workplace learning and apprenticeship

The discussion here picks the earlier thread from section 2.3 regarding situated learning and builds on this, and the work in section 1.5, and develops it in terms of teacher preparation and apprenticeship. Evans et al. provide a distinction between ‘training’ – which they say involves formal structure in order to transfer knowledge – and ‘workplace learning’, which they define as being “more encompassing” (2006, p.7) and as involving “locating learning in social relations at work” (*ibid.* p.7). An employment-led teacher preparation route fits well with this definition of workplace learning. One of the differences between workplace learning and work-based learning is identified as being that work-based learning does not “embody many of the features of the employer-employee relationships that are so crucial in influencing workplace learning experiences” (Evans et al. 2011, p.152). Whilst Evans et al. (2011) are cautious about simplistic distinctions between the two types of learning, their work does help to identify the impact and importance of drawing a salary from a school as a distinctive feature of employment-led teacher preparation programmes – a theme returned to in the data analysis in section 6.5.

2.8.1 Apprenticeship as a model for teacher preparation

The literature suggests that considering teacher preparation as a type of apprenticeship is an under-researched area with Mc Namara et al. claiming that:

Workplace learning in teacher education specifically and most particularly workplace learning undertaken in pursuit of postgraduate level study, is not well theorised....little work has been done to understand what insights might be offered about alternative conceptualisations of learning and induction, or what might be learned from the substantive knowledge bases from other professions (2014a, p.5).

A ‘Proquest’ search using “apprentice” and “teacher education” found 270 items and a similar search using the terms “apprentice” and “teacher preparation” found 22 items. Much of the literature was considered irrelevant because it was either about becoming a teacher of vocational education or it

Chapter 2: Literature review

used 'apprentice' as an adjective to describe a learner or beginner teacher, particularly in relation to what are called 'alternative certification' programmes in the USA (see section 2.9.1). No literature was found that had apprenticeship as a model of teacher preparation as its focus. Examination of the search results and abstracts revealed that the word 'apprentice' is almost exclusively used as a synonym for 'beginning' or 'novice' in the context of teacher preparation.

In the sense that apprenticeship can be described as the "journey a person takes from novice to expert in a specific occupational field" (Fuller and Unwin 2008, p.4) then teacher preparation can be considered as apprenticeship. The characterisation of apprenticeship as being a "journey through a series of stages of complexity, supported by experts, and allowing time for maturation both in terms of occupational expertise and personal development" (Fuller and Unwin 2009, p.410) also resonates with aspects of becoming a teacher, particularly with regard to supported teaching experiences. However, the suggestion that teacher preparation might be considered to be a form of apprenticeship is generally considered to be a contentious one, particularly amongst academics.

Eraut's (2002) analysis of workplace learning for novices identifies three continua, with the position held by the workplace along each determining the relationship between working and learning: social status of trainee; assumptions about learning; and commitment to learning. The social status of the pre-service teacher (trainee) in the workplace is developed using the analysis and discussion in section 6.6. Section 5.2.2 analyses the data regarding assumptions about learning and section 6.6 also discusses both assumptions about, and commitment to, learning.

Philpott (2014) has much to say about what he views as a workable model of apprenticeship as applied to teaching. He identifies that such an approach requires the following conditions to be present:

- pre-service teachers to spend more time than currently working on subsidiary tasks;
- a great deal of planning, time, space and resourcing;
- a need to maintain the importance of academic learning and certification;

- considerable opportunities for collaboration, reflection and discussion; and
- extensive and sustained support for pre-service teachers in the school environment.

Such a list would seem valid, but masks some of the complexities of teacher preparation. One of these is the complementary, contrasting and sometimes seemingly incompatible nature of the components of learning necessary to gain initial qualification.

All routes to initial teacher qualification in England have a strong vocational focus. This is true, in particular, for secondary school teaching where the vast majority of pre-service teachers have already completed a Bachelor's degree and the majority of the time on all preparation routes is spent in school placements. In the case of some of the newer English employment-led routes for teacher preparation there is a closer conceptualisation of teacher preparation as workplace learning.

The notion of teacher preparation as apprenticeship is not new. Keating (2010) says that during the second half of the 19th Century, school pupils aged 13 or more could be apprenticed to selected head teachers for five years as pupil-teachers in elementary schools. Following the completion of their apprenticeship they could then either work as an 'uncertificated teacher' or apply to go to a teacher training college to gain a Teacher's Certificate. Over the first few years of the 20th Century this system was reformed and, gradually, the main route into elementary teaching became teacher training college. For those teaching at secondary level in the second part of the 19th Century, the situation was rather different. Secondary education was only available in grammar and public schools, and a degree in the subject was considered to be sufficient qualification to teach. Gradually, in the late 19th Century, universities began to offer Post Graduate teaching diplomas and teacher training colleges started to offer programmes for prospective secondary school teachers. However, Keating (2010) notes that, even as late as 1932, less than half of secondary school teachers and head teachers had undertaken teacher preparation.

Clearly, therefore, a solely workplace-based model came to be considered inadequate for elementary school teacher preparation, as did the lack of any

Chapter 2: Literature review

kind of teacher preparation for secondary school teachers. Sheldon (2011) charts the changes in teacher preparation over the period since 1960, during which increasing political imperative, and a range of other factors (see, for example, Murray 2013), led to the complexity of the current provision in England, and thence to the return of the use of the word 'apprentice' in the context of teacher preparation by the then Secretary of State for Education (Gove 2010).

2.8.2 Limitations with apprenticeship models for teacher preparation

Whilst connections can be made between teacher preparation and apprenticeship, and both aim to develop new professionals with both practical and theoretical skills, it is also clear that there are limitations. At a very practical level, apprenticeship is only possible if there are suitable experts or 'masters' and Mc Namara et al. suggest that these are "not in plentiful supply in the nation's schools" (2014b, p.191).

Lortie (2002) suggests that beginning teaching is different to his own understanding of apprenticeship, which he describes as learning that moves in a "simple to complex sequence" with personal assistance from co-workers and involving the mastery of a technical vocabulary and knowledge. He argues that, for beginning teachers, this is not the case as they are doing the same work as an experienced teacher and therefore do not experience this sequential learning. He also says that they have limited support because of the isolated nature of the practice of teaching and criticises teaching as lacking a common technical vocabulary saying that this also impedes beginning teachers. Whilst these are valid arguments, they are also very dated in that Lortie's work was first published in 1975 and is based on data collected in the 1960s and early 1970s, when there was a much smaller school-based component to teacher preparation programmes.

Wringe (2012) puts forward an argument that learning to teach is quite different to learning to be a doctor, lawyer or engineer. He says that this is because other professions have a large body of procedures to learn, which need to be done properly and that the skill is in doing them well. He argues that teaching is relatively 'light' on procedures but that its success depends heavily on skill. Of course, being convinced by Wringe's (2012) argument is to

agree that teaching cannot be considered as a craft to be learnt 'on the job' and a recurring theme throughout this study is the contested nature of teaching as an occupation. Both Lortie (2002) and Wringe (2012) put forward good arguments as to the distinctiveness of teaching as compared with other professions (although perhaps other professions would also like to argue for their own distinctiveness). Being distinctive, however, does not mean that there is little to learn from the preparation offered to other professionals and, hence, work-based learning and the literature on apprenticeship can rightfully be examined for its relevance to teacher preparation.

Some of the constraints acting on apprenticeship models of learning in the workplace more generally also apply to teacher preparation specifically. Fuller and Unwin describe apprenticeships based solely in the workplace as "problematic for both pedagogical and social reasons" (2008, p.12). Diamond, in his introduction to Fuller and Unwin (2008), describes apprenticeships with restrictive characteristics as aiming to produce profitable workers fast without allowing them "time to study deeply, see the business from all angles, or reflect on what they are learning" (*ibid.* p.2). Fuller and Unwin (2009) further suggest that the involvement of the State has contributed to the development of apprenticeship types with restrictive characteristics. The relationship between theory and practice that is so difficult in teacher preparation formed the focus of section 2.6 of this study, is also present in apprenticeship learning where there is the:

danger that some employers, for understandable reasons, will focus too narrowly on immediate skill needs and fail to capitalise on the potential of an apprenticeship programme to deliver longer-term benefits for their organisation, their sector and their apprentice. Here the apprentice's key identity is that of 'worker' rather than a hybrid identity of work and learner. (Fuller and Unwin 2008, p.18).

When apprenticeship is over-focused on education, the reverse becomes a problem and apprenticeship is reduced to a form of work experience that complements a largely classroom-based programme, where the:

work-based element is too short, and possibly too tokenistic, to enable the apprentice to become part of an occupational community of practice. Theories and concepts in the classroom are too divorced

Chapter 2: Literature review

from the workplace and the identity of the 'student' overtakes that of 'apprentice'. (Fuller and Unwin 2008, p.19).

These criticisms are also to be found in the work of Grubb and Lazerson who further say that apprenticeship is "not a good setting for teaching abstract and theoretical material" (2006, p.297).

Much of the literature that discusses apprenticeship in the field of teacher preparation focuses on the phrase 'apprenticeship of observation' coined by Lortie in the 1975 edition of his book *Schoolteacher: A sociological study* (Lortie 2002). It is important to remember that this is only a part of Lortie's (2002) work. He criticises the teaching profession for lacking a rigorous basis and says that teacher preparation has little impact on beginning teachers because they "are not forced to compare, analyse and select from diverse possibilities" (Lortie 2002, p.71). Hence, he says that traditionalism, continuity and individualism are perpetuated by the system. Lortie suggests that one of the reasons for this is that teaching is unusual as a profession in that prospective teachers have already spent many hours as a learner, observing teachers at work from a learner's perspective and it is this that he called the 'apprenticeship of observation'. He describes such learning about teaching as "intuitive and imitative rather than explicit and analytical" (*ibid.* p.63).

As well as noting that Lortie says that beginning teachers have a limited view of teaching because they have only access to teachers' actions not their thought processes, Grossman (1991) says that the diversity of past experience means that they may have very different understandings of similar activities. She then goes further than Lortie to suggest that prospective teachers have a tendency to "use themselves as implicit models for the students they will encounter" (Grossman 1991, p.349). It would be easy to use Lortie's (2002) work to argue that teacher preparation is largely ineffectual in its battle against pre-service teacher beliefs gained from their personal experience as learners in schools. However, Mewborn and Tyminski (2006) contest that the situation is not as grim as Lortie suggests. They claim that the notion of an apprenticeship of observation has taken on "the air of authority through repetition, instead of empirical evidence" (Mewborn and Tyminski 2006, p.30). They present evidence from their own research that finds that "some future teachers are capable of being analytical about their goals for their teaching practices in the light of their prior experiences" (*ibid.* p.33) and that this can be the case for

both positive and negative experiences as a learner. However, in my view, many teacher educators would say that, commonly, pre-service teachers are influenced by their own experiences as a learner and that many find it difficult to analyse and reflect on these in terms of their own developing practice.

All this calls into question the appropriateness of apprenticeship as a model for teacher preparation, particularly in a dynamic and unstable education system influenced by political imperative. If one needs to learn theory, then apprenticeship is not generally a good model of learning through which to do so, but it is also the case that there are special features of teaching that make learning solely by apprenticeship an inappropriate way to learn. The debate then becomes about what a pre-service teacher should learn, as discussed in section 2.2.2 and, perhaps, whether apprenticeship might be suitable for modelling school placement experience rather than the whole of teacher preparation.

Varghese et al. (2005) criticise situated learning for its focus on the development of individuals within group practice which they say fails to take account the variations brought about through the motivation and personal experiences of teachers. They also identify neglect in situated learning of broader contexts institutionally, nationally and globally which affect aspects of access, participation and social engagement. Their criticism causes them to conclude that:

As teacher education programmes stand at present, situated learning cannot completely capture the complexities of a novice teacher entering, participating, and engaging in the language teaching profession (Varghese et al. 2005, p.31)

2.8.3 The 'expansive/restrictive continuum' in apprenticeship

Fuller and Unwin identify what they call “two approaches to characterising contemporary apprenticeship” (2003, p.410), developed using case studies from the steel industry and represented as a framework they call the ‘expansive/restrictive continuum’, shown in Figure 7. Restrictive apprenticeships are characterised by limited opportunities, a narrow focus for learning, and a sharp attention to the immediate need of the employer. In contrast, expansive approaches are characterised by a breadth of learning

Chapter 2: Literature review

opportunities, understanding of the apprentice as a learner and an appreciation of the apprentice as an individual.

Expansive	Restrictive
Dual status and learner and employee: Explicit institutional recognition and support for apprentice's status as a learner	Status as an employee dominates: Ambivalent institutional recognition and support for apprentice's status as learner
Participation in multiple communities of practice inside and outside the workplace	Restricted participation in multiple communities of practice
Primary community of practice has shared 'participative memory': cultural inheritance of apprenticeship	Primary community of practice has little or no 'participative memory': no or little tradition of apprenticeship
Broad: access to learning fostered by cross-company experience built into programme	Narrow: access to learning restricted in terms of tasks, knowledge and location
Access to range of qualification including knowledge-based vocational qualification	Access to competence-based qualification only
Planned time off the job including for college attendance and reflection	Virtually all on job: limited opportunities for reflection
Gradual transition to full participation	Fast - transition as quick as possible
Apprenticeship aim: rounded expert who is full participant	Apprenticeship aim: partial expert but full participant
Post-apprenticeship vision: progression for career	Post-apprenticeship vision: static for job
Apprenticeship is used as a vehicle for aligning the goals of developing the individual and organisational capacity	Apprenticeship is used to tailor individual capability to organisational need

Apprenticeship design fosters opportunities to extend identity through boundary crossing	Apprenticeship design limits opportunity to extend identity: little boundary crossing experienced
Apprentices have full access to their workplace's curriculum, values and goals	Apprentices have limited access to the range of skills and knowledge of their workplace

Figure 7 Approaches to apprenticeship: the expansive/restrictive continuum (Fuller and Unwin 2008)

In the next section this continuum is considered and developed in relation to teacher preparation.

2.8.4 Developing the expansive/restrictive continuum for teacher preparation

Evans et al. claim that the expansive/restrictive continuum discussed in the previous section can be used as a “conceptual and analytical tool for evaluating the quality of learning environments and for analysing an organisation’s approach to workforce development” (2006, p.35). Further, the work of Hodgkinson & Hodgkinson in Evans et al. (2006) identifies that expansive learning environments lead to the ‘best and most effective learning’ for practicing teachers, suggesting value in exploring it for teacher preparation.

Consideration of the three themes Fuller and Unwin (2003) identify as features of apprenticeship justifies further exploration of their continuum in the context of teacher preparation:

- Participation – pre-service teachers are part of departmental and pastoral teams, and potentially many other communities of practice; part of the process of teacher preparation is that of transition to the role of teacher; and pre-service teachers participate in learning experiences whilst on school placement.
- Personal development – programmes provide at least some opportunities for reflection and exploration; teacher preparation is the first step in pursuing a career in teaching with potential opportunities for career development; and may provide opportunities for personal development.

Chapter 2: Literature review

- Institutional arrangements – teacher preparation provides access to both professional and academic qualifications; pre-service teachers have status in some way as learners and may have status as an employee; and there is reification of apprenticeship.

The degree to which each of these is enacted, and the manner in which they are, determines where on the expansive/restrictive continuum the apprenticeship features for each characteristic. Working through each element of the original continuum using my personal experience and drawing on literature I adapted the statements to teacher preparation. Figure 8 shows Fuller and Unwin’s (2008) continuum in black type and my proposed adaptations for teacher preparation in blue italics. What is striking is how little adaptation is needed to make the statements applicable; almost all that was needed was to contextualise some of them. A version of the adapted continuum without Fuller & Unwin’s original is shown in Appendix 3.

Expansive	Restrictive
Dual status and learner and employee: Explicit institutional recognition and support for apprentice’s status as a learner <i>Status is explicitly as a learner in school and university settings</i>	Status as an employee dominates: Ambivalent institutional recognition and support for apprentice’s status as learner <i>Status as an employee dominates</i>
Participation in multiple communities of practice inside and outside the workplace <i>Participation in multiple communities of practice</i>	Restricted participation in multiple communities of practice <i>Restricted participation in multiple communities of practice</i>
Primary community of practice has shared ‘participative memory’: cultural inheritance of apprenticeship <i>Primary community of practice has a cultural inheritance of working in teacher preparation</i>	Primary community of practice has little or no ‘participative memory’: no or little tradition of apprenticeship <i>Primary community of practice has little or no tradition of working in teacher preparation</i>
Broad: access to learning fostered by cross-company experience built into programme <i>Broad: access to learning fostered by a range of experiences</i>	Narrow: access to learning restricted in terms of tasks, knowledge and location <i>Narrow: access to learning restricted in terms of tasks, knowledge and location</i>

Expansive	Restrictive
Access to range of qualification including knowledge-based vocational qualification <i>QTS, PGCE and M level credits</i>	Access to competence-based qualification only <i>QTS only</i>
Planned time off the job including for college attendance and reflection <i>Planned time off the job including for college attendance and for reflection</i>	Virtually all on job: limited opportunities for reflection <i>Virtually all on the job: limited opportunities for reflection</i>
Gradual transition to full participation <i>Gradual transition to full participation</i>	Fast – transition as quick as possible <i>Fast - transition as quick as possible</i>
Apprenticeship aim: rounded expert who is full participant <i>Learning journey</i>	Apprenticeship aim: partial expert but full participant <i>Competent classroom practitioner</i>
Post-apprenticeship vision: progression for career <i>Vision: Progression for career</i>	Post-apprenticeship vision: static for job <i>Vision: static</i>
Apprenticeship is used as a vehicle for aligning the goals of developing the individual and organisational capacity <i>Contributing to the profession</i>	Apprenticeship is used to tailor individual capability to organisational need <i>Filling a vacancy at a local level</i>
Apprenticeship design fosters opportunities to extend identity through boundary crossing <i>Programme design fosters opportunities to extend identity through boundary crossing</i>	Apprenticeship design limits opportunity to extend identity; little boundary crossing experienced <i>Programme design limits opportunities to extend identity; little boundary crossing experienced</i>
Apprentices have full access to their workplace’s curriculum, values and goals <i>Full access to the profession at all levels</i>	Apprentices have limited access to the range of skills and knowledge of their workplace <i>Limited and restricted access to the range of skills and knowledge needed</i>

Figure 8 The expansive/restrictive continuum: original and adapted for teacher preparation

2.8.5 Analysis of school placement experience as expansive apprenticeship

Whilst it might seem self-evident that school placement experience ought to be an essential part of teacher preparation, practice in the classroom is not

Chapter 2: Literature review

universally part of programmes internationally and programmes vary considerably in terms of the length of time given over to experience of various kinds in classrooms. However, in almost all countries teacher preparation incorporates learning in classrooms and elements of practice teaching of various kinds and Mattson et al. (2011) identify a general increase internationally in the proportion of time in teacher preparation programmes spent in school placement.

The work of Burn and Mutton (2013) provides a recent review of what they call ‘research –informed clinical practice’ in teacher preparation and identifies seven underlying principles. The phrase ‘research –informed clinical practice’ is used to convey:

the need to bring together knowledge and evidence from different sources, through a carefully sequenced programme which is deliberately designed to integrate teachers’ experiential learning at the ‘chalk face’ with research-based knowledge and insights from academic study and scholarship. (BERA 2014, p.41)

This conception of ‘research-informed clinical practice’ is about far more than a simple increase in the time spent by pre-service teachers in schools. As Burn and Mutton claim, such an increase could well “imply rejection of research-based knowledge” (2013, p.3) rather than a concern to integrate such knowledge into teacher preparation programmes.

These seven principles are compared with the expansive/restrictive continuum in Table 2, where the left hand column contains the principles for ‘research-informed clinical practice’ as outlined in Burn and Mutton (2013). The italicised entries in the right hand column are the features of expansive apprenticeship (Fuller and Unwin 2008) and the blue type is my own exemplification.

Table 2 Connections between 'research-based clinical practice' and 'expansive' apprenticeship

Principles of 'research-based clinical practice' (Burn and Mutton 2013, p.6):	Features of 'Expansive' apprenticeship (Fuller and Unwin 2008, p.6):
"Acknowledgement of both the profound value and the inevitable limitations of decontextualised research-based understandings of practice for beginning teachers"	<p><i>"Planned time off the job including for college attendance and for reflection"</i></p> <p>Acknowledgement of the need for 'theory' and 'practice' and for explorations of the complex connections between them.</p>
"Appreciation of the rich seams of knowledge, understanding and skill to which beginners could potentially gain access in the practice of experienced teachers"	<p><i>"Access to learning fostered by cross-company experiences built in to programme;"</i></p> <p><i>"Apprentices have full access to their workplace's curriculum, values and goals"</i></p> <p>The importance of experienced teachers as school-based teacher educators and mentors who are able to provide learning programmes containing a range of learning activities for pre-service teachers.</p>
"Understanding of the complexity and context-specific nature of experienced teachers' knowledge and of the processes by which it is developed within particular communities of practice"	<p><i>"Access to learning fostered by cross-company experiences built in to programme;"</i></p> <p><i>"Apprentices have full access to their workplace's curriculum, values and goals;"</i></p> <p><i>"Participation in multiple communities of practice inside and outside the workplace"</i></p> <p>The importance of pre-service teachers being part of various teams in school in order to understand how school and individual practices develop and the situated nature of this knowledge.</p>
"Explicit recognition of the fundamental importance of experience within teachers' learning, and of their need to test all ideas offered to them"	<p><i>"Access to learning fostered by cross-company experiences built in to programme;"</i></p> <p><i>"Participation in multiple communities of practice inside and outside the workplace"</i></p> <p>Being part of a 'learning' team where new practices are shared, tried and evaluated.</p>

Principles of ‘research-based clinical practice’ (Burn and Mutton 2013, p.6):	Features of ‘Expansive’ apprenticeship (Fuller and Unwin 2008, p.6):
“Awareness of the poor conditions for professional learning that tend to prevail in schools where ITE is only a marginal concern”	<p><i>“Primary community of practice has shared ‘participative memory’: cultural inheritance of apprenticeship”</i></p> <p>Acknowledgement of the value of long-term committed involvement in teacher preparation in providing a good environment for ITE.</p>
“Concern about equipping teachers to work effectively in educational contexts very different from those with which they have been familiar”	<p><i>“Explicit institutional recognition and support for apprentice’s status as learner;”</i></p> <p><i>“Apprenticeship design fosters opportunities to extend identity through boundary crossing”</i></p> <p>Need for explicit work on pre-service teachers’ beliefs to counteract their ‘apprenticeship of observation’ (Lortie 2002). Development and exploration of the role of teacher.</p>
“Ambition to produce teachers committed to lifelong learning and capable of generating the new professional knowledge that they will need to adapt to the different contexts and changing demands of the educational system”	<p><i>“Access to learning fostered by cross-company experiences built in to programme;”</i></p> <p><i>“Apprentices have full access to their workplace’s curriculum, values and goals;”</i></p> <p><i>“Post-apprenticeship vision: progression for career;”</i></p> <p><i>“Apprenticeship design fosters opportunities to extend identity through boundary crossing;”</i></p> <p><i>“Apprenticeship is used as a vehicle for aligning the goals of developing the individual and organisational capability”</i></p> <p>A number of features of expansive apprenticeship contribute to the development of teachers who are able to develop and learn throughout their careers in response to a rapidly changing education system.</p>

The table indicates that connections can be made between expansive apprenticeship and research-based clinical practice but also that neither concept brings out the breadth of the other. For example, Burn & Mutton’s (2013) first principle speaks to the complexity of the relationship between theory and practice in teacher preparation (see section 2.6). This was matched with a statement from Fuller and Unwin (2008) about ‘time off for college

attendance', which does not indicate the same level of complexity, although it allows space for this learning to be undertaken within the apprenticeship model. In a similar manner, 'access to learning and curriculum' in expansive apprenticeship (Fuller and Unwin 2008) does not fully bring out "the complexity and context-specific nature of experienced teachers' knowledge" from principle three in the work of Burn and Mutton (2013). Conversely, the expansive apprenticeship of Fuller and Unwin (2008) identifies boundary crossing as a way of extending identity and this does not appear in Burn & Mutton's (2013, p.6) work. The only expansive apprenticeship feature not appearing in any way is that relating to the nature of qualifications, but this is not within the remit of the paper by Burn and Mutton (2013).

Thus, there is some evidence that good school placement experiences, as one element of teacher preparation, and as defined by Burn and Mutton (2013), might be modelled to some extent using features of expansive apprenticeship (Fuller and Unwin 2008).

Fuller & Unwin's work was also part of a wider project, reported in Evans et al. 2006, about workplace learning more broadly. There are other applications of the expansive and restrictive framework developed in the work of Evans et al., one identifying expansive and restrictive approaches to workforce development and the other identifying expansive and restrictive approaches to learning culture/environment. The only discipline- or profession- specific example in the project was developed by Hodkinson and Hodkinson for the learning of experienced teachers in the workplace and is shown here in Figure 9. However, Evans et al. claim that their work indicates:

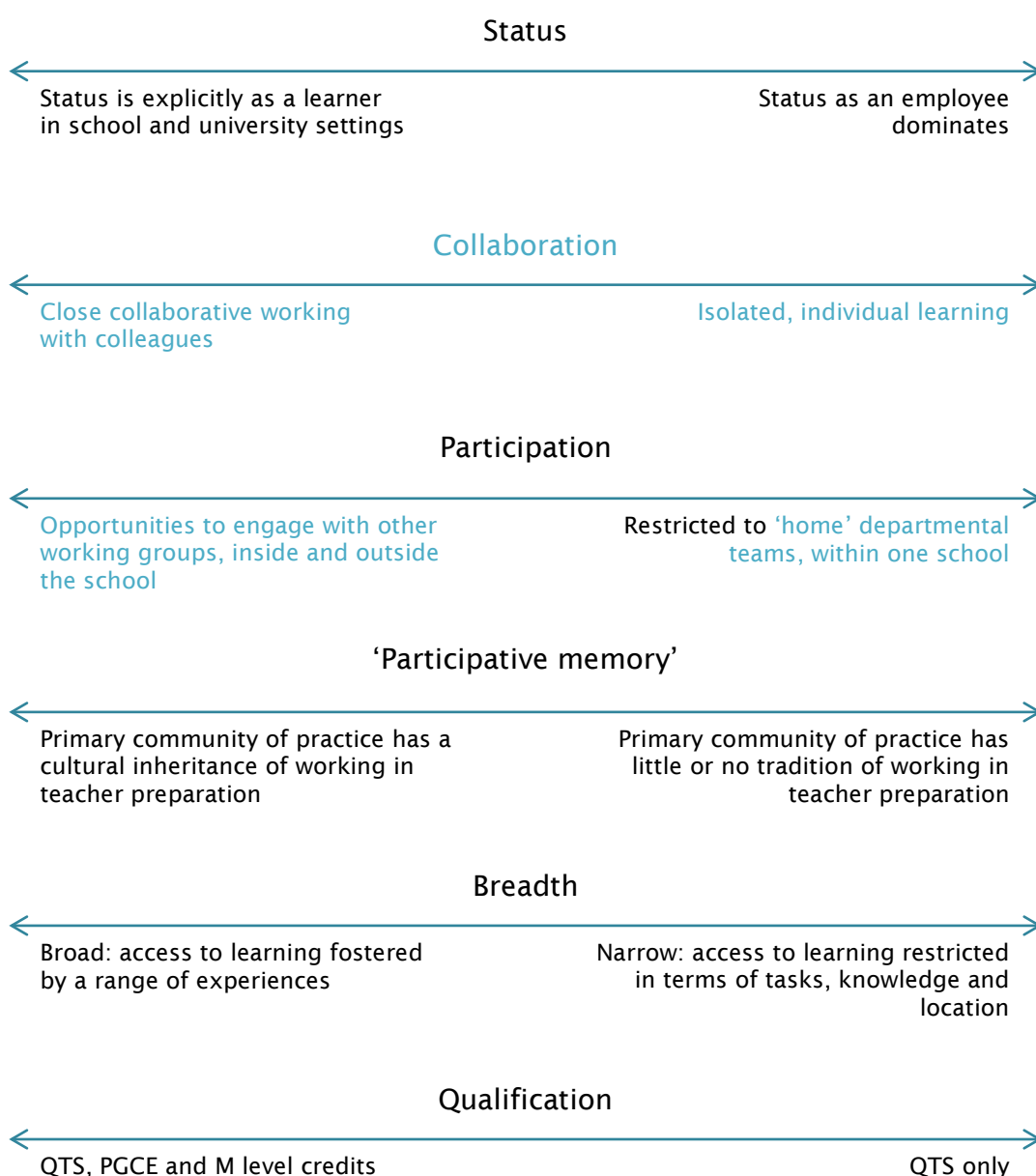
the adaptability of the expansive-restrictive framework and its usefulness as a basis from which to identify context-specific criteria.....[and it].... has the potential to increase understanding of the learning environments being created in very different sectoral and organisational contexts (2006, p.39).

Expansive	Restrictive
Close collaborative working with colleagues	Isolated, individualist working
Out-of-school educational opportunities, including opportunities to reflect and think differently	No out-of-school educational time to stand back, only narrow, short training programmes
An explicit focus on teacher learning, as a dimension of normal working practices	No explicit focus on teacher learning, except to meet crises or imposed initiatives
Supported opportunities for personal development that goes beyond school or government priorities	Teacher learning dominated by government and school agendas
Colleagues are mutually supportive in enhancing teacher learning	Colleagues obstruct or do not support each others' learning
Opportunities to engage with other working groups, inside and outside the school	Work restricted to "home" departmental teams, within one school
Opportunity to extend professional identity through boundary-crossing into other departments, school activities and schools	The only opportunities for boundary-crossing come with a major change of job
Support for variations in ways of working and learning, for teachers and departments	Standardised approaches to teaching and teacher learning are prescribed and imposed
Teachers use a wide range of learning approaches	Teachers use a narrow range of learning approaches

Figure 9 Hodkinson & Hodkinson's expansive and restrictive learning environments for teachers (Evans et al. 2006)

Following my first adaptation of the expansive/restrictive continuum I used the work of Hodkinson & Hodkinson (in Evans et al. 2006) to further refine the continuum with respect to teacher preparation. This further developed version of my adapted continuum, taking into account the work of Hodkinson & Hodkinson, but recognising the first identity of the pre-service teacher as a novice, is given in Figure 10 with the blue type indicating the modifications made using Figure 9. Specifically, an additional element labelled 'collaboration' was added, and the wording changed for both 'participation' and 'balance'. Important elements for the learning of 'novices' less relevant to 'experts' in this newer version in Figure 10 are those labelled 'participative memory', 'qualification', 'transition', 'access' and 'structural need'. The one labelled 'breadth' is about breadth of learning experience for the novice, and this is alternatively expressed by Hodkinson and Hodkinson for experienced teachers as breadth of approaches to teaching and teachers' learning, and range of

teaching approaches. As one would expect, there are clearly some commonalities between the two. Hodkinson and Hodkinson have two items broadly related to the concept of communities of practice, emphasising the importance given to teachers working collaboratively. In my first iteration of the continuum (shown in Appendix 3) one item was given the short description as ‘career future’ and in Hodkinson and Hodkinson’s version this item appears in the guise of ‘personal development’. There are also some differences between the two. These are necessary because the focus of this study is on the learning of pre-service teachers and for Hodkinson and Hodkinson the focus is on the learning of experienced teachers.



Chapter 2: Literature review

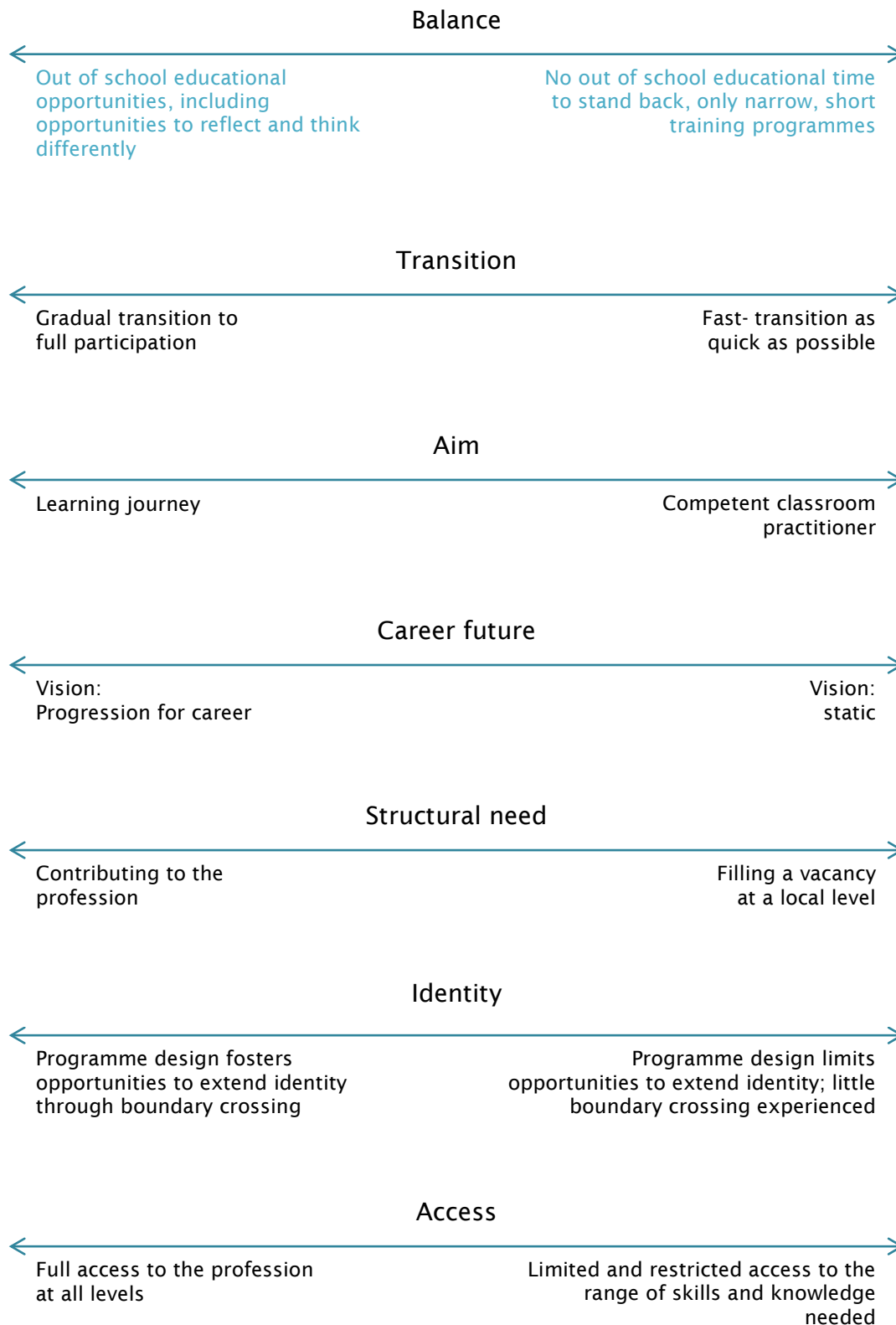


Figure 10 Modified expansive/restrictive continuum for teacher preparation

Evans et al. (2006) identify two factors which affect the ease with which schools can become expansive environments for teacher development in that teacher learning is not the main purpose of schools and that the culture of

secondary schools tends to isolate teachers. Both these factors can be seen to be of significance in the learning of pre-service teachers whilst on school placement. They also caution that the degree to which a workplace is expansive or restrictive is the “result of attitudes and practices over a long period. Accordingly, it may be very difficult to change” (Evans et al. 2006, p.67).

2.9 Teacher preparation routes

This study is set in an English context where there is increasing variation in teacher preparation routes (see section 1.4.3). The context in the U.S.A. is also one of variation and complexity, and, as identified in section 1.4.1, it is probably the country with the most similarity in range of teacher preparation routes to England. Hence, this study is also grounded, and draws on, research on American teacher preparation programmes and seeks to connect this work to the recent English context. This section provides a background on teacher preparation programmes in both locations.

2.9.1 Teacher preparation programmes in the USA

As Ellis and McNicholl (2015) remind us, education policy in the U.S.A. is local matter for individual states to manage, rather than centrally regulated as in England. In the U.S.A., teacher certification is not the same as licensing and each state sets its own licensing requirements (Goldhaber and Brewer 2000) which may include academic qualifications such as a grade point average from high school; having a Bachelor’s degree; completing an approved teacher preparation programme; gaining good marks on a general teaching test; and passing a content-specific test. Teacher preparation is controlled at state level, with each state having a different accountability programme (Wilson 2014). Programmes are regularly reviewed, either by the state or through the Council for the Accreditation of Educator Preparation but there is significant variation between states (Wilson 2014; Zeichner and Bier 2015).

The range of what are called ‘alternative certification’ programmes in the U.S.A. includes programmes such as Troops to Teachers, Teach for America and New York City Teaching Fellows, as well as local programmes run in partnership between school districts and universities, and programmes that

Chapter 2: Literature review

are delivered entirely on-line. The term usually refers to those programmes that are not traditional university undergraduate or postgraduate programmes (definitions do vary), although, according to Darling-Hammond (2012), most alternative certification programmes are run by universities. Each programme seems to have its own requirements for successful completion in terms of the pedagogical (general and subject-specific) content (known as 'coursework') and duration and expectations of pre-service teacher school practice placements. Darling-Hammond (2012) claims that in a few states it is possible to gain teacher accreditation by passing a content test and without any teacher preparation. Constantine et al. (2009) point out that many alternatively-certified teachers do receive some formal teacher preparation prior to starting teaching and Humphrey and Wechsler (2007) that many do have 'clinical experience', which would include supervised teaching and observation. However, they go on to say that "alternative certification expedites the process of the individual becoming the teacher of record" (Humphrey and Wechsler 2007, p.509) and that "it may be fair to question the adequacy – in terms of quality or quantity" (*ibid.* p.511) of the clinical experience of teachers who are alternative certified. Of non-university programmes Zeichner and Bier claim that:

some focus on a narrowly defined vision of teaching as management that is primarily aimed at raising students' standardised test scores....absent...is attention to a more professional vision of teaching (2015, p.25).

As an alternative certification programme, High Tech High's district intern programme (HTH 2017), for example, was specifically set up to prepare teachers to work in their Charter school network and pre-service teachers following the programme are employed in a non-supernumerary capacity during their preparation. Some alternative certification schemes operate outside of the established university system for teacher preparation, and as in the case of High Tech High, some are accredited to award their own degrees.

Zeichner and Bier (2015) suggest that there is also a 'hybrid' type of programme, which is more school-based than traditional university programmes but retains a strong university element and identify Urban Teacher Residencies (UTR) as examples of these hybrid programmes. Solomon (2009) distances Teacher Residency programmes from the alternative

certification movement in the USA. He suggests that alternative certification programmes were set up in response to dissatisfaction with traditional university teacher preparation programmes and that they seek to shorten the time taken to qualification whereas Teacher Residencies are a response to better prepare teachers to work in specific circumstances.

UTR programmes provide an interesting point of comparison to employment-led routes in England, although they have some significantly different features. In the Boston Teacher Residency (Solomon 2009), University of Chicago Urban Teacher Education Programme (Matsko and Hammerness 2013), Academy for Urban School Leadership (Berry et al. 2008) and Teachers College Teacher Residency (Goodwin et al. 2015) pre-service teachers study for a Master's degree and are supernumerary in a closely-supervised classroom for their preparation. Residencies seem to be of this form, and involve a high degree of partnership between universities and school districts, the support of a highly trained and expert mentor with the pre-service teaching placement in a specially selected school. The mentor teaches the pedagogical elements in the school context, hence it is highly contextualised and so the programme prepares teachers for the particular school district that they have committed to work in, rather than the necessarily broad-brush approach of a university. Residents commit to work in the District for a period of 3-5 years following certification, receive extensive induction support during that period and various financial incentives during their residency (Guha et al., 2016). These programmes to be a promising model for teacher preparation in that retention rates for high needs areas and subjects are high (Guha et al. 2017). Zeichner and Bier are cautious about UTRs, suggesting that they "do not necessarily lead to the kind of shared vision and cohesiveness that is an important element of good teacher education programmes" (2015, p.23). They also raise a concern that where there is "too much congruency between coursework and clinical work" it may be more difficult for pre-service teachers to "envision alternatives to current practices" (*ibid.* p.23).

Teacher Residency programmes in the U.S.A. are designed to meet specific local needs so the teacher preparation is very context specific (Matsko and Hammerness 2013; Williamson et al. 2016). Along with Guha et al. (2016) and Matsko and Hammerness (2013), Matsko and Hammerness (2013) find that those following a context-specific Teacher Residency have higher retention

Chapter 2: Literature review

rates in teaching. They argue that the benefits of a context-specific approach outweigh the drawbacks of learning in a single context because teachers are able to adapt to new contexts later when they move schools. The appropriateness of context-specific preparation could be called into question for school networks that take highly specific and very localised approaches to teaching practices.

Roth (1994) suggests a number of reasons for the growth of alternative certification programmes in the United States (paraphrased here):

- Very small numbers of minority teachers;
- The difficulty experienced by large urban and small rural schools in recruiting teachers;
- Large numbers of unqualified teachers in some schools;
- School-based programmes are seen to be more practice-oriented, cheaper and more focused on preparing teachers for urban schools;
- Lack of credibility of university-based teacher preparation.

He goes on to argue that the last of these is the most significant factor leading to the expansion of non-university teacher preparation programmes. The introduction of federal requirements for all teachers to be 'highly qualified' following the "No child left behind" act in 2001 is widely-acknowledged to have further increased pressure on teacher certification in the United States.

The funding of teacher preparation programmes is different in the U.S.A. as compared to England (see section 1.4.3). In the U.S.A. there is no governmental limit on the number of teacher preparation places, providers of teacher preparation programmes are not approved or registered in the same way as in England, and fees vary considerably by provider and programme. Thus, the American system seems characterised by deregulation and marketization.

As with the employment-led teacher preparation programmes in England, some American programmes are designed to lead to qualification for those working as unqualified teachers. Also in common with England, programmes have been developed in response to teacher shortages in mathematics and science. In the U.S.A., alternative certification programmes are also particularly targeted at recruiting teachers for special education and for teaching in high-poverty minority urban areas that find it hard to recruit teachers. There is a degree of

targeting schemes in England at those areas with more acute teacher shortages, such as coastal regions.

Whilst one can see areas of commonality between England and the U.S.A., there are a number of significant differences in the way teacher preparation is enacted. Hence, caution needs to be exercised when interpreting and applying American literature about alternative certification to the English context. Evans helpfully suggests distinguishing between traditional and alternative programmes on the basis of the “controlling institution, the sequencing of certification requirements, and the terminology used to describe programmes” (2010, p.184) and the approach taken by this study follows this recommendation. Zeichner (2016) suggests that a two-tier system is developing in the U.S.A. where universities prepare teachers for middle-class schools and independent programmes prepare them for schools serving disadvantaged areas. As with England, teacher preparation is a highly contested and political arena (see, for example, Baines, 2010).

2.9.2 Research findings regarding different preparation routes

If there was unequivocal evidence that was accepted by all as to which types of programme produced ‘better’ teachers we probably would not have the range of programmes currently available. However, measuring the effectiveness of teachers is difficult, and contestable and, as Constantine et al. find, even if one defines a measure of effectiveness, “variation...is not easily explained by observable training or teacher characteristics” (2009, p.74).

Several themes emerge from the literature. One of these concerns findings that the variation found within different teacher preparation pathways is far greater than the variation between pathways (Baines 2006; Boyd et al. 2005; Grossman and Loeb 2010; Kane et al. 2008; Laczko-Kerr and Berliner 2002; Ronfeldt et al. 2014; Zeichner 2016). Wilson sums this up neatly, saying that this variability makes it “hard to identify clear trends for or against” (2014, p.184) traditional and alternative programmes. Grossman and Loeb (2010, pp.24-25) identify four features of variation in post-graduate teacher preparation: the “nature of the provider”; “response to labour market needs”, “coursework” and “recruitment and selection”. However, more importantly, they claim that the difference in effectiveness between those following the same preparation route

Chapter 2: Literature review

is greater than the average difference in teacher effectiveness between routes (Grossman and Loeb 2010).

What emerges from the literature comparing the effectiveness of teachers from different routes is complex and contested. Darling-Hammond et al. (2005) finds that those teachers with non-standard or no certification are “less effective” teachers. Laczko-Kerr and Berliner concur, asserting that those with “teachers who have training in pedagogy outperform teachers without such training” (2002, p.9) and that “traditionally certified teachers teaching in their area of certification outperform both certified teachers teaching out-of-field and alternatively certified teachers” (*ibid.* p.9). The literature also suggests that those who had completed extensive teacher preparation programmes felt better prepared than those who had completed less preparation (Boe et al. 2007; Darling-Hammond et al. 2002; Ronfeldt et al. 2014). However, both Tournaki et al. (2009) and Constantine et al. (2009) find no difference between teachers from different preparation routes and Grossman and Loeb (2010), in a view supported by Bowen (2013), summarise the research in this area by saying that “evidence on how teachers from alternative routes perform in classrooms is mixed” (Grossman and Loeb 2010, p.26).

Careful reading of the literature reveals that reasons for the lack of clear evidence relate to the complexity of the programmes under study. As Grossman and Loeb note, the “the distinction between alternative and traditional programs is blurry at best and misleading at worst” (2010, p.25). A number of the studies are based on Teach for America and New York City Teaching Fellows, which are particular types of programme attracting specific types of pre-service teachers. Studies also use a range of quite different measures and, often, studies are carried out with elementary school age students as they have a single assigned teacher for the year so it is easier to track teacher effects using mathematics and reading test scores. Studies therefore need to be interpreted with caution given the limited data collected and its skills-focus. Both Laczko-Kerr and Berliner (2002) and Boyd et al. (2005) summarise the literature as suggesting that alternatively certified teachers (by which Laczko-Kerr and Berliner mean a non-university programme and Boyd et al. mean those newer routes with reduced coursework prior to teaching) are more effective in raising student test scores in mathematics and science than other types of teachers. However, such results need interpreting with caution.

It may be that the content knowledge of teachers is of more importance to successful teaching in some subjects than in others and that these alternatively certified teachers are specialists in the relevant areas.

Non-governmental campaigning organisations in the U.S.A. such as the National Council on Teacher Quality (NCTQ) and Bellwether Education Partners are damning about traditional teacher preparation programmes. In 2013 NCTQ criticised colleges and universities for being in the “industry of mediocrity, churning out first-year teachers with classroom management skills and content knowledge inadequate to thrive in classrooms” (Greenberg et al. 2013, p.1). Bellwether Education Partners’ report in 2016 says that “current methods of teacher training rely on imposing barriers to the profession, but there’s little evidence that the system is worth the investment of time or money” (Aldeman and Libetti Mitchel 2016, p.27). Others are somewhat more balanced. Bowen’s (2013) research, and the literature reviewed by Boyd et al. (2005), take a more cautious approach whereby the suggestion is made that those prepared through different routes have “different strengths”. In his study of technology teachers, Bowen found that “there may not be any statistically significant differences between alternatively licensed and traditionally licensed technology education teachers” (2013, p.96) and concludes:

both types of licensure provide value to the technology education classroom. Each type of licensed teacher offers a distinct set of skills and knowledge that create unique learning opportunities for students (Bowen 2013, p.97).

The government agency responsible for teacher preparation in England at the time (National College for Teaching and Leadership 2014b) described School Direct as “An approach to ITT which gives schools control over recruiting and training their own teachers”. Along with other initiatives such as ‘Grow Your own Illinois’ (Grow Your Own Illinois 2017) and a proposal for the region of Galloway in Scotland to tackle local teacher shortage by retraining local education staff (Lewis 2015), many routes are designed to meet short term, or potentially restrictive, goals for teacher recruitment.

2.9.3 Research findings regarding school-led routes in England

The historical perspective leading to the current range of provision of teacher preparation in England is discussed in Appendix 1 and the specifics of current provision in section 1.4.3. This section considers some of the research evidence regarding school-led and employment-led programmes in England. An extensive literature search revealed very little published empirical research regarding school-led routes in England. What literature there is has a close focus on the new school-led route 'School Direct', rolled out on a large scale in the academic year 2013-14.

The Geographical Association (GA) use data from a range of sources including schools and teacher preparation providers to come to a conclusion that "the amount of subject-specialist input is very variable" and that "some school-led partnerships rely heavily on generic training" (2015, p.3). The report raises concerns about the number of very small cohorts in geography, and whilst they report a greater diversity of applications due to the new routes into teaching, concerns are raised about the complexity of the teacher preparation system and the level of demand placed on schools. Hodgson analysed over 700 responses to a survey of members of the National Association of Teachers of English (NATE) regarding the School Direct teacher preparation route. He summarises the evidence as demonstrating doubt that schools "will be able to resource key elements of teacher training" (2014, p.7). His findings also report that respondents to the survey voiced "strong reservations" about "the desirability of training students within the pressured environment of a school" (*ibid.* p.13).

The Association of Teachers and Lecturers' (ATL) survey (2014) of pre-service teachers following School Direct routes was carried out half way through the 2013-14 academic year. Overall, the results of the survey indicate variation in provision and a degree of lack of understanding on the part of some schools regarding these teacher preparation programmes. 40% of survey respondents said that they had not had any support with planning and 61% described the communication between their 'training provider' and workplace (i.e. school) as 'poor' or 'fair'. 23% of respondents claimed that there was no clear understanding of their standing as a 'trainee' and them not being a newly qualified teacher. ATL summarise their survey findings as suggesting "some

quite serious flaws in the programme” (2014, p.13). All three reports provide some insight into School Direct programmes with the ATL survey (2014) being the only one that collected views of those following the programme, although the sample size is not reported. In common with the GA (2015) and NATE (Hodgson 2014) reports, the samples are self-selecting members of the associations so the representativeness of the samples cannot be determined.

Further empirical research on School Direct routes can be found in the work of Brown et al. (2014) who collected data through interviews with a range of stakeholders. Their findings support those from GA, NATE and ATL with pre-service teachers reporting a “lack of communication between school and university demands” and that they had a “tendency to bond according to the symbolic lead institution” (Brown et al. 2014, p.284). Their later work also identifies that there is a great deal of variation between programmes “leading to greater fragmentation within the system as a whole” (Brown et al. 2016, p.7) and that pre-service teachers felt that they received very different understandings of pedagogy from university and school with little effort made to help them reconcile these.

There are also two recent reports that take a different approach to examining teacher preparation provision in England. The first of these was commissioned by the Institute of Fiscal Studies, an independent research institute, into the cost-effectiveness of different preparation routes. Whilst some of its findings have been contested in terms of data collection, analysis and sampling, relevant to the discussion here is their broad finding that “particular routes do not attract [and/or] recruit the most effective teachers” (Allen et al. 2014, p.2). The other report is from the National Audit Office whose role includes scrutinising government spending. Their report (National Audit Office 2016) investigated whether or not the Department for Education got value for money from teacher preparation and its conclusions were broadly critical of government policy in these terms.

Other literature takes a more theoretically argued perspective on School Direct. Universally, this literature expresses disquiet, and raises concerns in particular about: the perceived lack of capacity of schools to manage teacher preparation (Allen 2015; Ellis and McNicholl 2015); potential diversification of provision (Hordern 2014); and limitations considered to be inherent in school-led

Chapter 2: Literature review

provision (Kelly and Pitfield 2013). Hordern's (2014) concerns about the development of school-specific notions of a 'good teacher' echo Kelly and Pitfield's view that "placing students in teaching schools is unlikely to produce practitioners who will ask difficult questions about the next initiative that is handed to them (2013, p.455)". These views point towards the underlying contentions regarding the nature of teacher education; a theme developed more fully in section 2.2.

The move to school-led teacher preparation and its political underpinnings, unsurprisingly, caused a degree of alarm in universities as student numbers and funding for teacher preparation decreased substantially. One of the changes introduced was that more funding went to schools and less to universities. Ellis and McNicholl (2015) take a less negative view of these developments than that expressed in the Universities UK (2014) report, suggesting, whilst it might superficially appear that significantly more teachers are prepared through School Direct, schools are actually channelling much of the funding they receive back to universities. However, it remains the case that, even when the support of a university is commissioned by a school, the level of funding received will be considerably less than for university-led programmes. Schools are also being encouraged by government to become 'accredited school-centred ITT providers' (SCITTs) (National College for Teaching and Leadership 2014a), in which case they can award 'Qualified Teacher Status' without the involvement of a university. The recommendation of the Carter Review that the PGCE be considered optional because "QTS is the essential component of ITT" (Carter 2015, p.13) provides further evidence of continuing pressure towards the marginalisation of universities in the preparation of teachers. Whilst both Brown et al. (2016) and Hagger and McIntyre (2006) (ten years apart) see moves to school-led teacher preparation as an opportunity to develop a new understanding of the relationship between theory and practice, Brown et al. (2016) is of the view that this is yet to happen.

2.9.4 The role of the university in teacher preparation

Long-standing teacher shortages, debates as to the most 'effective' way to prepare teachers, and the nature and location of that preparation, have led to

the role of the university being called into question. Consideration of the role of the university in an English context is the focus of the next section.

The debate suggests that the approaches used by universities, with models that emphasis reflective practice, integration of theory and practice research-informed practice, are seen as directly contradictory to the apprenticeship model that underpins the new school-led approaches in England (Gove 2010). Winch et al. (2013) suggest that conceptions of the teacher as either a craft worker or an executive technician, which are promoted by the apprenticeship approach, are insufficient to ensure proper professional learning because they do not ensure an appropriate balance between situated understanding, technical knowledge and critical reflection. The content of university-based and employment-led preparation programmes is generally different (e.g. Evans, 2010). This would make sense as those following employment-led preparation programmes have immediate needs relating to their survival in the classroom (Brantlinger and Smith 2013; Carter et al. 2011; Harrell and Harris 2006). Such a need would logically lead to the criticisms made by both Laczko-Kerr and Berliner (2002) and Nagy and Wang (2007) regarding the shortcomings of these teachers in terms of their pedagogical understanding and understanding of the social and academic development of young people.

As both Kennedy (1999) and Hordern (2014) point out, if teaching is a craft and best learnt on school placement then one needs to question the extent university involvement and their role. The move to a school-led teacher preparation system in England leaves teacher educators in HEIs in a different position to previously. As Brown et al. identify, this change has eroded “key elements that had previously distinguished the university contribution” (2014, p.282) following Roth’s challenge to universities to ask themselves what they “do different from and/or better than the schools in preparing teachers” (1994, p.267). Roth believes universities have a credibility problem, but both Maguire (2014) and Whitty (2014) take this further with Maguire arguing that in England, “we are seeing the attempted erasure of the role of the university-based teacher educationalist” (2014, p.782).

Chapter 2: Literature review

Brown et al. (2014) suggest that university teacher educators cannot complete with school-led teacher preparation in terms of meeting the demands for immediate practice-oriented preparation. Therefore, in a view also supported by Ellis and McNicholl (2015), if universities wish to assert the importance of their contribution they need to redefine it for the different kind of teacher preparation now required by the system imposed by government. Such redefining is important given Ellis and McNicholl's concern that:

Expecting HEI-based teacher educators to act as 'super-teachers', as external facilitators of reflection, as quality assurance consultants or as 'enthusiastic' and 'resilient' examiners of assignments is surely an unsustainable model of higher education's involvement in teacher education (2015, p.121).

Both Ellis (2015) and Kelly (2015) criticise universities for failing to communicate about the importance of their role in teacher preparation and their consequent responsibility for the current position they find themselves in, with Kelly suggesting that, "in many ways, the demise of university-based teacher training is universities' own fault, not least for their spineless acquiescence to government policy" (2015, no page numbers) .

2.9.5 Constraints and contestations in school-led teacher preparation routes

What is clear is that teacher preparation is constrained, particularly in England and the U.S.A., by government policy. Where the nature of teaching and what teachers do is contested, teacher preparation is consequently under pressure. In both England and the U.S.A., the physical location and the pedagogy of teacher preparation have forcibly been shifted by government policy away from universities through implementation of policies based on 'craft' and 'technician' conceptions of teaching. Brown et al. see this "redistribution of teacher education" as having "eroded key elements that had previously distinguished the university contribution" (2014, p.282). In such an environment it may be reasonable to agree with Meyers et al. (2014) that different teacher preparation routes have different goals and, as Brown et al. assert, that schools and universities have different concerns about "what is significant in teaching" (2014, p.290). As sections 2.9.2 and 2.9.3 demonstrate, the research does not lead to clear and uncontested findings as

to the effectiveness of non-traditional teacher preparation routes, with some researchers claiming that different routes produce similar outcomes (Ronfeldt et al. 2014;Tournaki et al. 2009).

Evans (2010) identifies that different routes have different content, both Bowen (2013) and Boyd et al. (2005) that they have different strengths and Meyers et al. (2014) that they have different goals. Hordern (2014) and Kelly and Pitfield (2013) both suggest that school-led routes (of which employment-led routes are a subset) are influenced by a school-specific notion of what makes a good teacher and Brown et al. that universities and schools have different concerns about “what is significant in teaching” (2014, p.290).

The conclusion of a number of researchers is that the debate needs to move on from discussion as to the relative merits of different routes for teacher preparation (Kane et al. 2008;Lloyd et al. 2012). The literature suggests a number of fruitful lines of inquiry, including:

- a. Do those following different preparation routes have different needs? (Carter et al. 2011)
- b. What are the features that make various routes and models successful? (Grossman and Loeb 2010;Lloyd et al. 2012;Ritter and Hancock 2007)
- c. What is the role of universities in school-led teacher preparation routes? (Ellis and McNicholl 2015;Roth 1994)
- d. Are different routes suited to prospective pre-service teachers with particular sets of characteristics? (Brantlinger and Smith 2013)
- e. What are the needs of those who Carter et al. describe as already “immersed in the realities of day-today teaching”? (2011, p.885) – who, as Brantlinger and Smith put it, “felt a pressing need to quickly master a basic repertoire of instructional competencies” Brantlinger and Smith (2013, p.38) and “frantically search for “proven” techniques and systems that will help them survive” (*ibid.* p.40).
- f. What is the quality and impact of the contributions universities make to school-led teacher preparation? (Ellis and McNicholl 2015)

Chapter 2: Literature review

This study seeks to contribute to these areas of investigation through the voices of those following an employment-led route to teacher preparation and by studying this route as a model of apprenticeship learning. The study therefore indicates some of the needs of those following this type of route (question e), with some indication as to how their needs might differ from those on other programmes (question a), and some of the potentially successful features of this route (question b). The contribution of the university to the programme (questions c and f) is not directly investigated, nor is the question about which routes are better suited to pre-school teachers with differing characteristics (question d), although there are indicators regarding both these questions in the findings.

2.10 Summary

The literature review presents the context for this study through consideration of different routes to teacher preparation and self-efficacy as a goal for teacher preparation. In setting the scene for considering the experiences of pre-service teachers on an employment-led route the nature of teacher knowledge and conceptions of the teacher are discussed. The chapter identifies that models of teacher preparation as apprenticeship are very evident in policy and practice, particularly in England and the U.S.A. In order to provide the necessary background for an investigation into this model the literature review critiques situated learning theory and teacher preparation as workplace learning and as apprenticeship. An apprenticeship approach also necessitates consideration of teacher identity, mentoring in teacher preparation and the relationship between theory and practice.

The chapter identifies apprenticeship as having the following key features:

- Expert-novice relationship;
- Situated learning – practice element;
- Dual role as employee and learner;
- Community of practice;
- Legitimate peripheral practice;
- Development of identity.

Apprenticeship is further identified as potentially expansive or restrictive across a number of characteristics of workplace learning. Together, these

features provide the basis for the analysis and discussion in the later chapters of this study with regard to the experiences of those who had followed an employment-led route for their teacher preparation.

Chapter 3: Research design

3.1 Introduction

As stated in section 1.8, the broad aim of this study is to use self-reported data from teachers to gain a deeper understanding of the experiences of secondary teachers in England with regard to their teacher preparation. The study uses self-efficacy data (see section 3.8) collected from those teaching different secondary school subjects who had recently completed teacher preparation through a range of routes. It also uses interview data (see section 3.9) from a smaller number of teachers who had followed one specific employment-led programme. The focus is on the four research questions discussed in section 3.5, using these to consider participants' perceptions regarding experiences leading to their development as a teacher and on the appropriateness of apprenticeship as a model for teacher preparation (see later chapters). This chapter, therefore, details the design of this study, including justification of the tools selected and developed for the study, and discussion of the methods of analysis.

3.2 Research perspectives

It should be noted that some researchers, such as Denzin and Lincoln (2011) and Merriam and Tisdell (2016), consider interpretivism and constructivism to be interchangeable and that some conflate the two (Patton 2002). Merriam & Tisdell argue that "all qualitative research is interested in how meaning is constructed, how people make sense of their lives and their worlds" (2016, p.25) hence, most qualitative research is constructivist to some degree, with some types of study having an additional dimension. Lincoln et al. (2011) identify that the findings in constructivist/interpretivist studies are constructed by the researcher through interaction with the participants in order to "generate one or a few constructions on which there is substantial consensus" (*ibid.* p.104).

This study is interpretivist in nature, reporting the perceptions of participants, seeking to uncover their experiences, and to understand the meanings participants construct from these regarding their development as a teacher.

Chapter 3: Research design

The study situates knowledge as being constructed by individuals through their experience. Patton (2002) identifies 'context sensitivity' as one of 12 major characteristics of qualitative research. Lincoln & Guba assert the centrality of context, saying that:

Social reality is relative to the individuals involved and to the particular context in which they find themselves. Change the individuals and you change the reality. Or change the context and you change the reality. Or change both the individuals and the context and you thoroughly change the reality (Lincoln and Guba 2013, p.39).

Savin-Baden and Major (2013) assert the critical importance of context in understanding meaning and Merriam and Tisdell (2016) that interpretive/constructivist research is 'context-bound'. This study is strongly contextualised because it draws on the experiences of those who had followed one particular employment-led teacher preparation programme at a particular point in time. Context is of importance; in my personal experience, different pre-service teachers can have contrasting experiences in the same school and the same pre-service teacher can have contrasting experiences in different schools. The importance of context and this variability however, does not mean that there is nothing to draw out regarding common experiences and understandings. The nature of reality in this study is not positioned as completely unique to individuals or as ever-varying due to individual and contextual factors. It is positioned from the perspective that the role of the researcher is to construct meanings from the data and then to seek some consensus in the experiences and meanings in order to extend knowledge and understanding about the research issue under investigation.

Another, more pragmatic and evaluative purpose for the study seeks deeper understanding of the experiences of those following a secondary employment-led route in order to make recommendations to improve future practice, reflecting the realities of teacher preparation both in England and elsewhere. Lincoln et al. (2011) consider that the aim of interpretivist/constructivist studies should be to use the understanding gained in order to inform practice. The aspect of the study examining teacher preparation as apprenticeship in particular has elements what Johnson & Christensen call 'evaluation as theory assessment' where the study asks: "Is this programme conceptualised in a way that it should work?" (2012, p.10). That the study has an evaluative element is

supported by Savin-Baden & Major who identify evaluation as “always located in a political context” and as being political “because it feeds into decision making” and that programmes that are evaluated are “politically located” (2013, p.275). Savin-Baden & Major go on to use Simons’ (1987) work to argue that the purpose of evaluation is to “contribute to dialogue and help shape understanding of social policy, rather than merely to help people to decide between alternatives” (2013, p.275). This purpose for the study is returned to in the final chapter.

3.3 Reflexivity

The highly contextual nature of the study (discussed in the previous section), the personal perspective recognised in section 1.6, and Lichtman’s view that “knowledge is constructed by the researcher and is affected by his or her context” (2013, p.13) make it necessary that I make reference to self in this study. According to Lincoln et al. in an interpretivist/constructivist approach, “we are shaped by our lived experiences, and these will always come out in the knowledge we generate as researchers” (2011, p.104). They go on to describe the researcher in this paradigm as a ‘passionate participant’ and that researchers must be reflective.

The approach taken in this study is that of reflexivity, described by Lincoln et al. as “serious and problematic” (2011, p. 115) but seen here as advantageous in providing a rich point for reflection and for informed analysis. There are two senses in which reflexivity is used in this thesis. Here, reflexivity is discussed in the sense used in research methods literature; it is discussed in the sense in which it is used in social theory as relational interdependency in section 6.10.

Reflexivity is not the same as reflection. Pillow (2003) makes a clear distinction between the two, saying that the latter requires an ‘other’ and, unlike the former, a degree of self-awareness. Bolton (2014) provides what, in my view, is a more useable distinction considering reflection as consideration about events outside one’s self and reflexivity as a questioning of one’s own attitudes, values and opinions in order to identify and challenge the impact of one’s self on the situation. Bolton (2014) agrees with May and Perry (2014) that reflexivity has an element of “turning back on one’s self” (*ibid.* p.109).

Chapter 3: Research design

Hence a reflexive approach is necessary in order to identify the influences on my research due to my background and philosophy, my emotional responses to the research and social influences (Maxwell 2012). It is also important that I consider the less well-acknowledged influence of political, interpersonal and institutional contexts and the assumptions embedded within the data analysis methods and their use (Mauthner and Doucet 2003). Both Lincoln et al.'s view that "research efforts are shaped and staged around the binaries, contradictions and paradoxes that form our own lives" (2011, p.124) and Pelias' assertion that "researchers cannot be separated from their research" (2011, p.663) recognise the essential nature of research as situated in the researcher's own life (Clough 2002; Maxwell 2012; Pillow 2003). They identify the need for me to consider my work from other perspectives and with what Alvesson and Skoldberg (2000, p.vii) call a 'self-critical eye'. Greenbank (2003) argues that educational research is not value-free and therefore requires such an approach.

Whilst I do not appear as an actor in this study, a strong sense of self runs through it and I am constantly accounted for in the text (Rhodes and Brown 2005), both explicitly and implicitly; an approach that follows Tracy's advice that one might "*show* rather than *tell* self-reflexivity by weaving one's reactions or reflexive considerations of self-as-instrument throughout" (2010, p.842). Parts of what I have written are what (Clough 2002) calls an 'expression of myself' and this approach is underpinned by the use of a reflective journal to refine meanings and interpretation of my role and to provide a forum for reflecting on my own thinking patterns (Slotnick and Janesick 2011). This informs much of what I have written and allows me to use myself as a resource in the study (Maxwell 2012).

3.4 Methodological approaches

The study has both qualitative and quantitative elements designed to address specific research questions. The use of self-reported data, i.e. self-efficacy scores and semi-structured interview data, provides a common theme between the qualitative and quantitative elements of the study. The study overall, therefore, has a mixed design and the next section considers such designs as a basis for research before applying them to this study in section 3.6. Details

as to the survey methods and tools used are in section 3.8 and for the semi-structured interviews in section 3.9.

3.4.1 Mixed research designs

Lichtman (2013) defines a *mixed methods* study as one involving both quantitative and qualitative data and a *multi-method* study as only involving one data type or the other. In the case of mixed methods research, Bryman (2012); Symonds and Gorard (2010) and Brannen (2005a) all identify increasing use of this approach in the social sciences. However, combining quantitative and qualitative data is not uncontentious and Mair describes what he sees as clear differences between qualitative and quantitative methods in terms of “case-oriented versus variable-oriented research” (2008, p.198) based on what he claims are different concepts of ‘understanding’. Bryman asserts that qualitative and quantitative methods are often considered to be different and incompatible paradigms, but he argues against this dichotomous view, suggesting that it is “by no means clear” (2012, p.630) that qualitative and quantitative approaches are paradigmatically different. Symonds and Gorard are of the view that data collection tools, types of data and analytic techniques are “not necessarily paradigmatic” (2010, pp.126-7). Brannen (2005a) provides additional support for this argument, using a range of counter-examples to demonstrate that the relationship between these different empirical approaches is complex.

Broadly, researchers are advised to make careful consideration and choices of the most appropriate methodological approaches at all points in their study (Bryman 2012; Symonds and Gorard 2010; Mason 2006; Brannen 2005a; Fielding 2010; Bryman et al. 2008; Brannen 2005b). Creswell and Plano Clark (2011); Bryman (2012); Johnson and Onwuegbuzie (2004) all see combining both as a way of improving a study by using the strengths of both qualitative and quantitative approaches to overcome the weaknesses of the other. Creswell and Plano Clark strongly support mixed method designs as providing “the most complete analysis of problems” (2011, p.21). Strong support for appropriate use of mixed methods research comes from Johnson and Onwuegbuzie who state that “methodological pluralism or eclecticism” (2004, p.14) is a key feature of mixed methods research leading to what they call “superior research” (*ibid.* p15).

Chapter 3: Research design

The literature suggests a number of ways of thinking in detail about mixed method studies. These have some commonalities in approach, and also some different ways of expressing other aspects of study design. There is general agreement that decisions about mixing methods need to take place at all stages of a research study and that these include a requirement to be specific at the rationale stage in terms of philosophical approach (ontology, epistemology and axiology), and to specify the interaction, relative priority (or weighting), timings and procedures for mixing across strands (Creswell and Plano Clark 2011; Symonds and Gorard 2010; Mason 2006; Brannen 2005a; Brannen 2005b; Johnson and Onwuegbuzie 2004).

Symonds and Gorard (2010) take a different approach. They are concerned that researchers do not think in simply in terms of three choices: qualitative, quantitative or mixed methods, suggesting the label of mixed methods be removed so “we can better examine the propensity for mixes in research construction” (*ibid.* p.130). They argue that methods, data and analysis are not intrinsically qualitative or quantitative by nature. They propose using six ‘core research design mechanisms’ formed by adding construction, transformation and influence to the traditional mixed methods notions of conceptual levels, weight and timing. These form their ‘core design typology’ (*ibid.* p.122), shown in Table 3.

Table 3 Symonds & Gorard's (2010, p.132) core research design mechanisms

Mechanism	Description
Construction	How elements of the research process are constructed and can be used to construct further elements.
Transformation	When data becomes transformed between elements of the process (e.g. words into numbers).
Influence	How elements of the research process inform and influence each other - this includes triangulation.

Conceptual positioning	The ways in which different methods are used to answer the research question(s).
Weighting	The degree of influence given to elements of the research process.
Timing	How the elements of the research process are conducted in time, in relation to each other.

It is therefore important to discuss the relationship between the quantitative and qualitative elements in this study and to justify the approach following the advice in the literature. This is discussed in section 3.6, following outlining of the research questions and discussion regarding quality.

3.4.2 Quality

The data collection in this study comprises of a quantitative survey element and the main qualitative interview element. Quality with regard to the quantitative element is considered using a more ‘traditional’ approach, appropriate to the specific data collection tool, and this is discussed in section 3.8.3. The issues regarding the quality of the qualitative data are discussed in section 3.9.4.

Brief consideration is undertaken here regarding triangulation. Lichtman considers it as inappropriate in qualitative studies as its use would mean “adopting a post-positive position in which the researcher strives for an objective stance” (2013, p.292). Hammersley’s (2008) critique of conceptions of triangulation identifies four different meanings for the term: as validity checking; indefinite triangulation; as seeking complementary information; and as epistemological dialogue or juxtaposition. May uses the validity definition of triangulation and finds that it is problematic because, she says, “data can only validate each other if the different methods measure the same object” (2010, p.2) and this is not possible in qualitative research. In this study, Patton’s approach of “capturing and respecting multiple perspectives (2002, p. 544), also called ‘complementary information’ (Hammersley 2008), is taken through

Chapter 3: Research design

purposive sampling of participants and use of literature in the field. In Sobh & Perry's words:

different perceptions should not be considered to be confusing glimpses of the same reality, rather they should be considered to foster understanding of the reasons for the complexities of that reality (2006, p.1203).

3.5 Research questions

In setting the context more broadly for this study, the literature is well-populated with findings as to what makes good teacher preparation (supportive mentoring; good connections between university and school; etc. see Lawson et al., 2015, for example). Teacher educators also possess a great deal of 'folklore' about factors affecting the success of individuals (age; educational background; etc.). Hence, the focus here is on the perceptions and experiences of those who had recently undertaken teacher preparation. The study has teacher perceptions regarding their teacher preparation as an overarching theme, so all the questions reflect the self-reported nature of the data in this study with teachers supplying self-efficacy scores and discussing their experiences and perceptions in semi-structured interviews.

Underpinning employment-led preparation routes in England is a conceptualisation of teacher preparation as apprenticeship (see section 1.4.3). There is little published work where teacher preparation is viewed in this way and the approach here engages both broadly and deeply with the nature of teacher knowledge and how it is learnt. There is also little research drawing on the views of participants in such programmes and hence three of the research questions use participants who had previously completed an employment-led programme of teacher preparation as key informants. This section continues by considering each of the four research questions in more detail.

3.5.1 Question 1

What differences are there in the self-efficacy of newly qualified secondary school teachers who had followed school-led teacher preparation routes compared with those who had followed more traditional postgraduate routes?

Any discussion about new routes for teacher preparation inevitably involves discussion or comparison about how the outcomes of different routes compare. Clearly, the expenditure of large sums of government money in England on teacher preparation requires justification (Allen et al. 2014; National Audit Office 2016) and the first research question intends to contribute to this debate generally, and to this study specifically, by investigating the self-efficacy of teachers who previously completed different preparation routes. Collecting self-efficacy data is more common in other countries than in England, so this part of the study provides a degree of scale and context, as well as a perspective not generally found in the literature about English teachers.

The literature reviewed in section 2.5 argues the case for the appropriateness of self-efficacy as a measure of teacher behaviour and as an indicator of student attainment. As indicated in section 1.4.3 the number of pre-service teachers on employment-led programmes is relatively small so the question distinguishes only between the traditional university-led university programme and the newer school-led programmes (which are of varying types as also noted in section 1.4.3). The purpose of the question is to identify whether or not there are any differences in the self-efficacy of Newly Qualified Teachers (NQTs) teaching in secondary schools depending on which of these two main types of teacher preparation route they had previously completed. Discussion regarding measures of self-efficacy, survey design and the detail of the methods used in this study are in section 3.8.

3.5.2 Question 2

What insights are provided by teachers who had previously followed an employment-led secondary teacher preparation route as to the meaningful experiences they had whilst undertaking teacher preparation?

Whilst employment-led routes are not completely new in the English context, the increased emphasis on school-led routes changed the teacher preparation landscape with the introduction of School Direct (see section 1.4.3) and led to some of the challenges documented in section 1.4.4. To answer question 2 the experiences described by secondary school teachers in their interviews will be analysed to identify those that had particular meaning for them and to seek

Chapter 3: Research design

some consensus. Interviewing teachers following completion of their teacher preparation and early on in their teaching career provides some distance for reflection in the semi-structured interviews and for key experiences to emerge and be developed to identify meaning in the interview context.

3.5.3 Question 3

What are some of the key developmental processes identified by teachers as having impacted on their own learning and on their experiences on an employment-led teacher preparation route?

The literature regarding teacher learning (section 2.2.7) identifies teaching as a complex and highly skilled undertaking. That this learning takes time is implicit in the literature discussed, and the length and level of many teacher preparation programmes world-wide (section 1.4.1). The purpose of the previous research question is to identify experiences that had meaning for the teachers interviewed whilst undertaking employment-led teacher preparation. This question has as its purpose identifying some of the processes at work over time using teachers' self-reports regarding their teacher preparation. These have been called 'developmental processes' in this study and are identified through analysis of the teachers' interview data using the teachers' own understandings of their own learning whilst undergoing teacher preparation.

3.5.4 Question 4

What do the views of participants tell us about teacher apprenticeship through an employment-led route as a model of teacher preparation?

In the literature review, section 2.3.2 considers the situated learning elements present in teacher preparation and section 2.8 explores employment-led teacher preparation more specifically as apprenticeship drawing on literature from workplace learning. This question seeks to identify first-hand the ways in which participants had experienced teacher preparation as apprenticeship using questions designed specifically for this purpose in the interview schedule. Section 3.9 details the specific data collection methods used for the teacher interviews and describes how the semi-structured interview schedule was designed in order to collect the data for research questions 2, 3 and 4.

3.6 The mixed research design for this study

A mixed research design provides necessary coherence to the study in respect of these questions. In Creswell's (2015) terms the mixed design is broadly of the 'explanatory sequential' type where the quantitative strand is followed by the qualitative strand. However, the connection between the two strands is not as strongly of the 'explained by' type as suggested by Creswell's classic design. Following Creswell and Plano Clark (2011), the design is identified further as primarily qualitative, with the quantitative data collection preceding and independent from the qualitative data collection. Additional evidence regarding the findings for question 1 are sought from the interview data and question 1 serves as a context-setting or scoping question for the study as a whole. The work of Creswell and Plano Clark (2011) also suggests that having different data collection methods for different research questions is appropriate and that having different participants for different strands is also a reasonable choice. In this study, the quantitative element for question 1 seeks to draw data from a broad sample of the population of Newly Qualified secondary school teachers who had followed a range of teacher preparation routes. The remaining questions require a different sample because the focus is on those who had previously followed an employment-led teacher preparation route. No attempt was made to draw the interview sample from the survey participants.

An alternative view on the mixed design is given by considering the additional elements from Symonds & Gorard's (2010) model discussed in section 3.4.1. Their 'construction' and 'influence' mechanisms can be seen where the survey and literature on apprenticeship are used inform the development of the data collection tool for the interviews (section 3.9). 'Transformation' is seen in the data analysis where the interview data is analysed both thematically and as narrative case studies (chapter 6).

3.7 Ethical considerations

Merriam and Tisdell (2016), Johnson and Christensen (2012) and Guillemin and Gillam (2016) all view ethical issues in qualitative research as being more than a single event where pre-established guides are followed to gain ethics committee approval. For Merriam and Tisdell ethical issues concern the

Chapter 3: Research design

“investigator’s own sensitivity and values” (2016, p.261) and for Guillemin and Gillam they “are part of the everyday practice of doing research” (2016, p.262). For this study full ethical approval was sought and given for both the survey and the interview data collection from the University of Southampton Ethics and Research Governance Office. Evidence of this being granted is given in in Appendices 4 and 5. Issues relating to ethical matters regarding the survey are discussed in the latter half of section 3.8.2. Those matters relating to the interviews are discussed in the latter half of section 3.9.2.

3.8 Self-efficacy survey

Following the outline research design indicated in section 3.6 this section moves on to discussing the design of the self-efficacy strand of this mixed methods study, specifically to answer research question 1. Section 2.5 discussed self-efficacy as a construct and as an indicator of teacher behaviour and student attainment. The discussion here moves on to the choice of measurement tool for teacher-self efficacy.

3.8.1 Measuring self-efficacy

Self-efficacy is, inherently, self-reported and its measurement is therefore congruent with the concept. Both Fives (2003) and Tschannen-Moran and Woolfolk Hoy (2001) chart the development of measures of teacher self-efficacy. A commonly-used and subsequently-developed tool in this field was based on measuring teachers’ self-efficacy in managing students with difficult behaviour (Gibson & Dembo, 1984 in Bandura, 1997). However, Tschannen-Moran and Woolfolk Hoy criticise its use:

Although the Gibson and Dembo measure has been the most popular of the teacher efficacy instruments to date, problems remain both conceptually and statistically. The lack of clarity about the meaning of the two factors and the instability of the factor structure make this instrument problematic for researchers (2001, p.789).

Klassen and Usher provide a detailed analysis of the measurement tools available for teacher efficacy and quote Pajares (1996) as suggesting that self-efficacy research has been “ ‘plagued’ by a ‘range of measurement problems’ ” (2010, p.8). They further state that Pajares (1996) provides clear guidance

saying that measures need to be constructed with an eye to the specificity, correspondence and generality of self-efficacy beliefs. Designing suitable questions is a challenging undertaking given Klassen et al.'s assertion that "self-efficacy behaviours are most predictive of future behaviours when measures are narrowly defined, but they lose generalizability to other settings as specificity increases" (2011, p.24). Bandura (1997) stresses that it is essential to measure teachers' beliefs about their own efficacy rather than the efficacy of teachers in general and Pajares asserts that "measures of self-efficacy should be tailored to the criterial task being assessed and the domain of functioning being analysed" (1995, p.6). The emphasis of Hattie and Yates (2014) in describing self-efficacy as being at the task related level also allows for analysis of the suitability of survey items for self-efficacy.

Hence, a range of difficulties are identified in the field of teacher efficacy relating to the conceptual basis, definitions and understanding of efficacy, the design of tools and the validity and reliability of these tools. These difficulties subsequently led to the development of the Teachers' Self-Efficacy Scale (TSES) (Tschannen-Moran and Woolfolk Hoy 2001), which has a firm basis in Bandura's definition of self-efficacy, and reflects the need to develop tools that measured teacher self-efficacy for all aspects of teaching, and an understanding of the personal nature of self-efficacy. The TSES has become the clearly recommended tool for in this field. Klassen and Usher describe it as "theoretically sound" (2010, p.21) and as "an appealing alternative" (*ibid.* p.19) to Gibson & Dembo's Teacher Efficacy Scale which they say "should be abandoned" (*ibid.* p.18). Other measures are also criticised as lacking the specificity of context necessary for measuring self-efficacy, relying instead on tools that are instead measuring outcome expectations, intention, capability or confidence instead (Klassen et al. 2011; Klassen and Usher 2010). The TSES also fits with Bandura's recommendations for item construction in that items should contain verbs like "can" and "able to", refer to the respondent as "I" and that each test item contains a barrier (Skaalvik and Skaalvik 2010).

A scale previously developed by Bandura was used by Tschannen-Moran and Woolfolk Hoy (2001) to develop the TSES. They criticise Bandura's work as lacking information on the reliability and validity of the scale and because the items "did not accurately reflect the kinds of tasks that typically make up a teacher's work life" (Tschannen-Moran and Woolfolk Hoy 2001, p.795) Their

Chapter 3: Research design

work describes the process by which they developed their own instrument from that of Bandura’s original, along with trialling and testing the construct validity in order to produce both 12- (see Figure 11) and 24- item tools with “three dimensions of efficacy for instructional strategies, student engagement, and classroom management” representing “the richness of teachers’ work lives and the requirements of good teaching” (*ibid.* p.801).

	Teacher beliefs	How much can you do?
1	How much can you do to control disruptive behaviour in the classroom?	1 2 3 4 5 6 7 8 9
2	How much can you do to motivate students who show low interest in school work?	1 2 3 4 5 6 7 8 9
3	How much can you do to get students to believe that they can do well in school work?	1 2 3 4 5 6 7 8 9
4	How much can you do to help your students value learning?	1 2 3 4 5 6 7 8 9
5	To what extent can you craft good questions for your students?	1 2 3 4 5 6 7 8 9
6	How much can you do to get children to follow classroom rules?	1 2 3 4 5 6 7 8 9
7	How much can you do to calm a student who is disruptive or noisy?	1 2 3 4 5 6 7 8 9
8	How well can you establish a classroom management system with each group of students?	1 2 3 4 5 6 7 8 9
9	How much can you use a variety of assessment strategies?	1 2 3 4 5 6 7 8 9
10	To what extent can you provide an alternative explanation or example when students are confused?	1 2 3 4 5 6 7 8 9
11	How can you assist families in helping their children do well at school?	1 2 3 4 5 6 7 8 9
12	How well can you implement alternative strategies in your classroom?	1 2 3 4 5 6 7 8 9

Figure 11 the 12-item Teachers’ Self-Efficacy Scale (TSES) (Tschannen-Moran and Woolfolk Hoy 2001)

Further support for the use of the TSES tool, and the 12-item version in particular, comes from the work of Klassen et al. which explores the validity of

this tool across five different countries and they conclude their study by saying that:

We found that the TSES showed convincing evidence of invariance of factor forms, factor loadings, and factor variances and covariances across groups of teachers within culturally similar regions in North America and East Asia, and across six groups of teachers from five countries in North America, East Asia, and Europe.....the results from this study show that items on the TSES show strong internal consistency not only in American settings but also in Canadian, Cypriot, Korean and Singaporean settings (2009, p.73).

There seemed no additional particular benefit in using the 24 item tool, and I considered it to be particularly important to keep the survey short, so the 12 item TSES tool (Figure 11) was therefore chosen for this study.

3.8.2 Survey administration and design

de Leeuw et al. begin their chapter on survey research by saying that “the idea of conducting a survey is deceptively simple” (2008, p.1). This is followed by an extensive list of factors that need to be considered when carrying out a survey, perhaps implying that poor survey research is easy, but doing it well is a demanding undertaking. Following Mohler et al.’s (2008) advice, the intention here is to detail my undertakings in designing and administering the survey. The approach here uses four ‘cornerstones’: coverage, sampling, response and measurement (de Leeuw et al. 2008) as a framework for describing and justifying the survey method used to collect responses from NQTs to the 12 item TSES questionnaire regarding their self-efficacy.

The survey was administered approximately six months into teachers’ first teaching post, in the spring of the academic year, to allow them the opportunity to settle in but not so long so that their teacher preparation might become less of a factor in terms of their views of their effectiveness as teachers. It was not possible to gain direct access to NQTs for a survey so probability sampling could not be carried out. The survey was carried out twice, firstly on a national sample of teachers who had followed a range of school-led routes and then on a local sample of NQTs. The survey response

Chapter 3: Research design

data discussed in section 4.2 discusses the very low response rate to the national survey and hence the need for additional data collection.

The national survey used the list of 'lead' schools in England which was freely available on the NCTL (National College for Teaching and Leadership) website. Also available was a list of those schools working in partnership with these 'lead' schools for school-led teacher preparation routes. The list of schools was checked to ensure geographical coverage and it was found to include schools from all post codes in England. Those that were primary schools, middle schools or special schools were removed from the list, as were schools that appeared more than once, leaving 3083 schools working in 519 partnerships. This list of 519 'lead' schools was sampled randomly using a random number generator. Those lead schools working in partnership with fewer than five schools were excluded from the sample to ensure the survey reached as many NQTs as possible, as efficiently as possible. The final sample identified 71 lead schools selected randomly which is approximately 7% of the total. 71 schools was deemed to be a sufficient number of schools to survey, given their potential to reach other schools as noted below. Initial contact with the person holding responsibility at the 'lead' school was initially attempted by telephone and they were specifically asked if they would send the survey link (Appendix 6) and associated email with Participant Information Sheet (see Appendix 7) to those NQTs in their own school and others they work in partnership with teaching in English secondary schools. Where telephone contact was not established, emails were sent. In total 71 lead schools were contacted, each with an average of 10 partnership schools, from across England with a potential reach to approximately 700 schools in total (23% of those possible). There were 13743 secondary final year pre-service teachers awarded Qualified Teacher Status in 2013-14 and 94% of these were employed in a teaching post by January 2015 (Department for Education 2015) and are therefore potentially surveyed in this study.

The low response rate discussed in section 4.2 led to the decision to collect further data so the survey was also distributed more locally by emailing the same Participant Information Sheet and survey to named contacts working with pre-service teachers in 80 schools. A reminder was sent out 10 days after the initial email in order to increase the response rate.

Lynn discusses the factors that influence someone to participate in a survey, saying that “the decision as to whether or not to cooperate is an outcome of the interaction between interview and sample member” (2008, p.42). He goes on to assert that the social environment is one key element in this decision through the extent to which the sample member feels a social responsibility to participate and through the persuasion of the interviewer. The intention here was to engage the individual responsible for teacher preparation in this way, and that individual NQTs would then feel a responsibility to that person to participate themselves, which would mean that the pseudo-personal feel of the contact increased the response rate. Initial contact with lead schools was made by telephone, where possible, and, following Lynn’s (2008) advice:

emphasise the benefits - in terms of finding out the answer to a question of importance and interest to them;

“reduce and de-emphasise the drawbacks” (*ibid.* p.48) – by explaining that the questionnaire is short, requires no free-writing responses and convenient to complete;

“address legitimate concerns of sample members” (*ibid.* p.48) – through emphasising the anonymity of responses.

Making the survey web-based raised some issues for consideration. Lynn (2008) claims that non-response rates for web surveys can be high and that the proportion of respondents who fail to complete a web-based survey is higher than for surveys delivered in other forms. All schools in England now have internet access, and teachers make increasing use of technology in supporting their teaching so answering an online survey should be very convenient for respondents. Both Manfreda and Vehovar (2008) and Check and Schutt (2011) suggest that online surveys are very appropriate when surveying establishments, such as schools, where email is used for both internal and external communication. One concern with web-based surveys is what de Leeuw calls “establishing sincerity of purpose” (2008, p.118) given the volume of spam and phishing many users are subjected to. Hence, sending the survey via ‘lead’ schools lent it validity, as did ensuring that my academic affiliation appeared on the email, paperwork and online survey.

Whilst a compelling pragmatic and practical case can be made for collecting data through an online survey, this should not be the only consideration. It needs also to be clear that the data collection method produces data of

Chapter 3: Research design

sufficient quality and quantity for the purpose. De Leeuw's summary of work in this area claims that "comparisons between web and mail surveys give mixed results" (2008, p.125) with some studies finding more partial non-response and more item non-response with web surveys and others reporting less. Dillman (2008) states that non-completion is a problem with web surveys as compared with face to face interviews, where inhibitions may reduce this occurring. de Leeuw is of the view that "there is some indication that internet surveys are more like mail than telephone surveys, with more extreme answers in telephone surveys" (2008, p.124). de Leeuw and Hox report that "response rates in face-to-face and telephone interviews are in general higher than in self-administered surveys" (2008, p.240).

Having the survey go to participants indirectly had the advantage of guaranteeing anonymity for participants as I had no way of knowing who they were or where they worked. Because only the survey link was sent out and responses were completed electronically online before being sent directly and securely to the university server, schools did not have access to the responses from their NQTs either. This degree of anonymity perhaps has disadvantages as it meant that there was no way of knowing the geographical spread of respondents and there was no way of matching their responses to other data collected for validation purposes, but it was hoped that the degree of anonymity offered allowed participants to respond freely and honestly and reduce social desirability and self-preservation effects (de Leeuw 2008; Schwarz et al. 2008). Such an approach avoided the main risk of harm to participants through the risk of breaches of confidentiality and associated consequences (Singer 2008) and increased the chances of participation.

It should be noted that the TSES tool (see Figure 11 in previous section) is reproduced exactly as designed by Tschannen-Moran and Woolfolk Hoy (2001), including the somewhat inexact and colloquial terms used to describe each point on the scale. I consider it probable that the use of the labels 'nothing', 'very little', 'some influence', 'quite a bit' and 'a great deal' as labels for the scales is to allow for verbal-type responses to be converted to numerical data for analysis. The labels seem reasonable, and fit with the advice of Schwarz et al. (2008) that middle values on a scale are assumed by respondents to reflect 'average' behaviour. Groves et al. (2009) claim that labelling scale points increases reliability of responses. Check and Schutt (2011) support the use of a

tool designed and tested for validity by another researcher and reproduction of the tool exactly as originally designed allows for comparison with other research using the same tool, such as that by Muijs et.al. (2012) regarding Teach First teachers, and with international studies (Duffin et al. 2012; Klassen et al. 2009; Mueller 2012; Fox and Peters 2013).

The survey is as short as possible. In line with the ethical approval granted (see Appendix 4) the online survey asked for the participant to give their consent following the provision of sufficient information to make this an informed decision (Singer 2008). Singer (2008) recommends that participants be provided with a list of 'frequently asked questions' and this was the approach taken with the Participant Information Sheet (see Appendix 7). This included my name and contact details which, according to de Leeuw and Hox (2008) establishes trust through reciprocation. They were then asked to confirm their eligibility to take part and their teacher preparation route (called Initial Teacher Training route in the survey). de Leeuw (2008) says that the visual aspects of an online survey are particularly important; hence the self-efficacy questions were presented in matrix form so that they reproduced the paper version in Tschannen-Moran and Woolfolk Hoy (2001) and in a visually appealing, easily completed manner that also reduced cognitive effort on the part of the respondent (Manfreda and Vehovar 2008). Using a matrix form also reduced the number of words used, and emphasised the connections and structure in the survey (Check and Schutt 2011). The full survey can be found in Appendix 6. de Leeuw et al. (2008) suggest that questionnaire, respondent and method of data collection are the three main sources of measurement error. They advise that "A well-designed and well-tested questionnaire is the basis for reducing measurement error" (*ibid.* p.11) so the procedures above are designed with this in mind. Advice regarding surveys tells one to schedule a series of reminders for participants in order to increase the response rate. This was not possible as I did not have any way of contacting them directly.

3.8.3 Survey quality

Some of the reliability and validity issues for the survey are discussed in the previous section because they relate to the survey design.

Chapter 3: Research design

Available data on NQTs is very limited so it was not possible to follow the advice of de Leeuw et al. (2008) and collect auxiliary data in order to cross-check the sample for non-response error, so it was not possible to know the extent to which the national sample matched the attributes of the population. Nor was it possible to check how representative responses from the locally-distributed survey were of the population approached. Groves et al. (2009) suggest that sources of error in surveys include construct validity, measurement error, processing error and sampling bias and that there are three distinct standards survey questions should meet regarding content, cognition, and usability.

In terms of its design, the TSES tool fits well with much of the advice from Groves et al. (2009) which is amended from the work of Sudman and Bradburn (1982). The questions are very specific, use closed questions for measuring attitude, specify the object clearly, avoid double-barrelled questions and start with the end of the scale that is least 'popular'.

Construct validity for the TSES tool is discussed extensively in Tschannen-Moran and Woolfolk Hoy (2001). The tool is slightly unusual in having nine categories for response given that, whilst increasing the number of categories to at least seven improves the quality of the measurement, more than that is not considered to improve measurement (Fowler and Cosenza 2008; Groves et al. 2009). Fowler and Cosenza also claim that:

There is evidence that respondents give more consistent (and hence reliable) ratings when all the categories are labelled with words, rather than just labelling the end points or using numbers (2008, p.151).

The TSES tool has nine categories so it would be rather cumbersome with labels for each and, as the tool was reproduced as exactly as possible, only the labelling used in the original version was used, which does not label all nine points. One change was made, which was to add a response option at the end labelled "prefer not to answer". This was included on the advice of Manfreda and Vehovar (2008), who say that this is a better option than forcing people to respond to every question. On the advice of Check and Shutt the specific instruction to 'Please indicate one response for each line' was included as they say that "some respondents will think they have completed the entire matrix after they have responded to just a few of the questions" (2011, p.164).

3.8.4 Survey analysis

The directions for scoring the results for the TSES (Tschannen-Moran and Woolfolk Hoy 2014) say that there are three moderately correlated factors: efficacy in student engagement, efficacy in instructional practices and efficacy in classroom management. In order to determine the sub-scale scores, the unweighted mean for the items loading on each factor is calculated:

Efficacy in student engagement	Items: 2, 3, 4, 11
Efficacy in instructional practices	Items: 5, 9, 10, 12
Efficacy in classroom management	Items: 1, 6, 7, 8

Data analysis was carried out in various ways in order to format the data so that the results could be compared with that reported in the published literature. Analysis methods therefore included the calculation of means for each survey question, mean and standard deviation for the overall score on the questionnaire and the means and standard deviations using the factor structure identified for the survey instrument. Cronbach's Alpha was calculated, as this is the measure commonly used for TSES, as a measure of internal consistency and reliability using SPSS. The analysis and discussion for the survey results is reported in the next chapter.

3.9 Interviews

The previous section details the design of the quantitative strand of this mixed methods study so the focus moves on here to the design of qualitative strand where semi-structured interviews were used to collect data from those who had previously followed an employment-led route to teacher preparation.

3.9.1 Sample

Those interviewed in this study were purposefully identified as having the potential to provide a range of perspectives having previously followed the employment-led route accredited by one university. They covered a number of secondary school subjects and had all been employed whilst undertaking their teacher preparation in a range of different schools.

Chapter 3: Research design

Emmel nicely suggests that a sampling strategy considers the ways in which “fragments of insight” (2013, p.138) are collected. His clear argument is that the question as to ‘how many interviews are sufficient?’ is the wrong one to ask. He asserts a need for a sampling strategy that chooses participants on the grounds of what they have to offer the study and that ‘informational redundancy’ and the point at which the sample “most adequately reflects observed reality in the most convincing way for the intended audience” (Emmel 2013, p.153) within the project constraints indicates the place to stop.

I used the range of networks and contacts I already possessed to identify potential interviewees so that I could be sure they fitted the criteria. Section 1.4.3 identifies that there were two designations of the new School Direct school-led routes in England (School Direct Training and School Direct Salaried) but my experience as a teacher educator suggests that many of those on the ‘salaried’ route actually follow a programme that is almost indistinguishable from those on the ‘training’ route. As identified earlier, at the time data collection was carried out, the Department for Education in England allocated the number of places in each subject for each route to specific training alliances and HEIs. There are many more places available in some subjects, such as mathematics, than others such as Physical Education (where there is no shortage of teachers) or subjects where far fewer teachers are required, for example, classics. At the time of data collection, there were also higher bursaries available for some subjects compared to others, and bursaries are used by government as a recruitment incentive so in some subjects potential teachers may have more incentive to apply for a salaried place, and demand for salaried places may be higher.

The full list of those who were registered on the employment-led route under consideration for the year 2013-14 consisted of 48 potential participants and the corresponding list for 2014-15 identified 44 potential participants. Those on the lists trained to teach a range of secondary school subjects but approximately 50% were English or mathematics specialists. Very few trained to teach more practical subjects. As discussed in section 3.9.3, the pilot interview shaped the study as focusing on those whose experiences of their teacher preparation had been as at least partially non-supernumerary and hence could properly be described as employment-led. Hence, those whose experience I knew had not been of that type were removed from the sample,

along with those who had not completed the programme, those for whom I had no contact details or who were teaching abroad. The pen portraits of participants in Appendix 8 demonstrate some of the variation in characteristics in the sample including non-supernumerary experience during their teacher preparation, age, prior experience and subject taught.

Potential interviewees were approached a few at a time so that the data collection could follow the initial approach promptly, but also so that initial analysis could be carried out during the interview period, and to keep the data collection process manageable. Later in the data collection efforts were made to broaden the secondary school subjects taught by those interviews, and to try and interview someone who had not completed the programme.

Unfortunately, there were no participants who responded to the interview request in some subject areas and no one who had withdrawn agreed to be interviewed. Given that withdrawal from the programme is often for health reasons or following a change in personal circumstances, this is both understandable and not viewed as a significant omission.

Those selected were approached using a short informal email and invited to respond with a request for further information if they were willing to participate. If they did not respond one further email was sent inviting participation. In total, 31 teachers were approached and 13 agreed to be interviewed. All were interviewed during their second year of working as a qualified teacher following the completion of their teacher preparation programme and all but one was still teaching.

In line with the ethical approval granted (Appendix 5) participants were asked to give both their written consent, following being given the Participant Information Sheet (Appendix 10), and verbal assent at the beginning of the recorded interview. Procedures for maintaining anonymity and confidentiality were outlined in the application for ethical procedure and follow current university policy. The risks to participants were identified as low, so the main focus was on the right not to take part, to withdraw at any time, to know what they were agreeing to take part in and protection of identity (Robson 2002). The latter was of particular importance and therefore all participants have been given pseudonyms, where names were given in interviews these were

Chapter 3: Research design

transcribed by function rather than name, and unnecessary potentially identifying detail has been removed from the reported analysis.

After the pilot interview with the teacher educator and 13 interviews with teachers, I judged that I had sufficient data to stop interviewing. At that stage the early analysis had indicated that clear themes were emerging. Further data collection would either have meant accessing another cohort of teachers, by which time aspects of their teacher preparation programme may have changed, or interviewing teachers later in their teaching career when they might remember less about their teacher preparation.

3.9.2 Interviews

The interview schedule was semi-structured to allow for adaptation if considered appropriate (Robson 2002). Smith and Elger (2014) describe the interviewer role as that of keeping a focus on specific examples, asking the interviewee to compare different experiences, probing, raising queries, and rehearsing provisional interpretations with them. Hence, some of the issues identified in earlier interviews were developed in the later interviews in order to interrogate emerging themes and what Sobh and Perry call “prediction of reasons for phenomena” (2006, p.1204). In designing the interview schedule the proposed methods of analysis were borne in mind (section 3.9.5) to ensure a good match between the two.

The interview schedule is shown in Appendix 11. It closely follows the model of teacher preparation as situated learning formed in section 2.3.2 and seeks to explain this to participants before drawing out their perceptions and experiences of their teacher preparation using these terms. The interview schedule included the diagram in Figure 12 where Wenger’s (1998) four components to a social theory of learning are shown in blue. In situated learning theory, learning takes place in authentic activity, context and culture through Lave & Wenger’s (1991) communities of practice (labelled collaboration) and participation (both in green). The terms in red are ones I identified from section 2.3 as features of situated learning that I needed to draw out of participants in the interviews. The questions in the interview schedule closely mirror this figure as can be seen in Appendix 11. Whilst questions were written in the third person on the interview schedule, the

sample excerpts from transcripts in Appendix 12 demonstrate that I often used the first person tense to pose the questions as the interview progressed and rapport with the interviewee developed. In taking a constructionist approach to the interviews (Lichtman 2013), to some extent, versions of events were co-constructed between myself and the teacher during the interview.

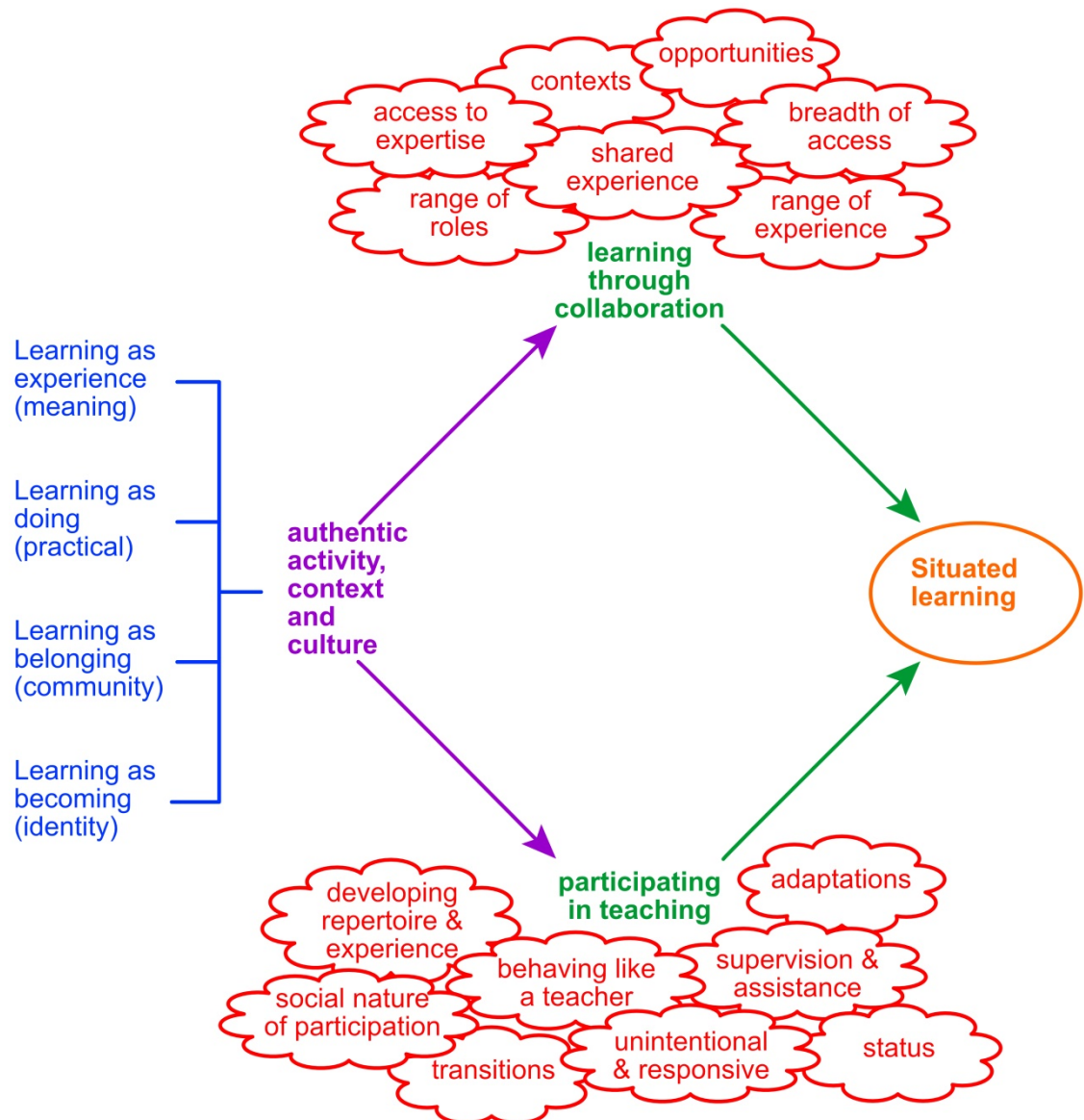


Figure 12 Modelling employment-led teacher preparation as situated learning

Interviewees were offered the opportunity of being interviewed face-to-face, by telephone or over a Skype video call. Their permission was sought to audio record the interview. Skype was the preferred medium for interviews as it is time efficient and has many of the benefits of both face-to-face and telephone interviewing (Hanna 2012) and Deakin and Wakefield (2013) suggest that the

Chapter 3: Research design

data from interviews carried out using Skype is as reliable as that collected using face-to-face interview techniques. Saumure and Given (2009) provide valuable practical advice and warnings about the potential problems with using Skype for research interviews, in particular time lags in conversation, ensuring that both participants can see one another's non-verbal cues, the risk of technology failure and ethical issues. One particular advantage in using Skype for interviews is that both the interviewer and the interviewee are able to choose the location of the interview as somewhere that is both safe and comfortable for themselves (Hanna 2012; Redlich-Amirav and Higginbottom 2014). The ethical approval in Appendix 5 also includes approval for the risk assessment carried out regarding the nature of the interviews.

In practice, interviews were carried out using all three forms, following the preference of the interviewee. All interviews lasted between three-quarters of an hour and an hour and a scan of the transcripts gives a visual indication that the interview schedule enabled participants to talk at length about their experiences and their perceptions of their learning and so to tell their story in the way they wished.

3.9.3 Pilot Interviews

The interview tool was piloted with two interviewees, one of whom was a teacher educator at another university, who had offered to help, and the other was the first participant selected to take part in the research (see sample selection in section 3.9.1). The main aim of the piloting aspect of the study was to see how well the questions in the interview schedule were understood and what adjustments needed to be made. Kim suggests that pilots help in "identifying specific methodological and epistemological issues so that researchers can affirm, shape or revise how to pursue and achieve their goals" (2010, p.193). The intention was to use the pilot data as part of the main study. As discussed in further in section 3.9.5, the data collection had aspects that were iterative and developmental, and therefore the pilot data still had value and could be included in the analysis. As there is no 'treatment' being tested including the pilot data does not lead to 'contamination' of the data sample.

The first pilot interview was a particularly valuable experience. In some ways, I felt I learnt less than I had anticipated because the teacher educator gave 'second-hand' experience of teacher preparation which tended to lead to generalities rather than specifics. I was also aware in that interviewing a teacher educator I felt was, to some extent, validating my own opinions and experiences, rather than challenging them. However, the interview strongly shaped what followed because I identified the following issues:

- A sense that the diversity within teacher preparation routes meant that 'school-led' was not a useful label, hence the use of 'employment-led' in this study;
- That those following the new employment-led routes who were non-supernumerary, at least to some degree, would be of most interest to interview;
- The need to contextualise some of the identified aspects of situated learning by being prepared to give more specific applications to teaching if the interviewee needed clarification;
- The value of focusing on interviewing those who had experienced the programme themselves in order to gain first hand experiences rather than the more general opinions of other stakeholders. This focused the study and the research questions more closely on the perceptions of participants in the programme;
- A need to develop the exploration of the teacher identity of pre-service teachers;
- The potentially different learning intentions of different routes and therefore some need to unpick the notion of a 'successful outcome' at the end of teacher preparation.

The first pilot interview also provided a degree of triangulation (Boeije 2002) and verification as to the value of the study and approach.

The second interview was also a pilot. It was clear that the interview schedule allowed the participant to 'tell her story' and that, for her, there were some cathartic aspects to this (Merriam and Tisdell 2016). It also allowed me to try out some prompts so that, if necessary, I was able to explain the situated learning aspects in ways that connected more closely with teaching and experiences of teacher preparation. In particular, the distinction between

Chapter 3: Research design

'collaborative learning' and 'learning through participation' needed drawing out in the context of teaching so that it was clear that the latter related to teacher learning through the act of engaging with pupils' learning. Being a teacher educator myself allowed me to draw on what I considered the participants might have experienced in order to provide exemplification, when requested. In both cases, the pilot interviews were close to an hour long so it was clear that the number of questions fitted the time agreed with the participant at the outset.

3.9.4 Interview data quality

That issues of quality in qualitative research raise disagreement can be seen in the literature (see, for example, Lichtman, 2013 and Savin-Baden & Major, 2013). What is more generally agreed is that qualitative research needs to be reported in a way that the author makes "a convincing argument that the topic is important" (Lichtman 2013, p.296) and that clarity is given regarding what was done. The latter is sometimes called an 'audit trail' in the literature; an approach taken in this study. Generally the advice seems to be that the researcher should make all possible efforts to make their methods and analysis transparent so that the reader can be convinced as to the quality, truthfulness and authenticity of the study (Merriam and Associates 2002). Merriam and Associates (2002) also suggest that rich thick description (as found in chapter 5) can ensure external validity, and give a detailed list of questions a study can address to address issues of quality. Johnson and Christensen support the use of an approach using "low interference descriptions so that the reader can experience the participants' actual language, dialect and personal meanings" (2012, p.267) with the aim being to "describe richly a certain group of people or a certain event on a specific context" (*ibid.* p. 270). Patton's (2002) advice for demonstrating quality includes using negative cases (see discussion regarding sample in section 3.9.1) and review by both experts and inquiry participants; both of which feature in this study. Merriam and Tisdell (2016) assert that taking a constructivist approach means that quality is determined through methodological rigour on the part of the researcher. These approaches are returned to, along with issues regarding generalisation, in chapter 7.

During data analysis, my supervisory team have acted as an expert review team to support the data analysis process. Other colleagues have also acted in this manner for parts of the qualitative data analysis. Transcripts were returned to participants following interview and the early findings were shared with some of the later interviewees at the end of their interviews to produce a degree of quality checking.

3.9.5 Data analysis

There is general agreement amongst researchers (e.g. Schwandt, 1997; Lichtman, 2013; Johnson & Christensen, 2012; Merriam & Tisdell, 2016) that analysis of qualitative data should start as soon as data is collected and continue throughout the data collection period as an iterative process. There is some variation in the definitions, descriptions and methods used in the literature for thematic content analysis and coding (Savin-Baden and Major 2013), so the approach here is drawn from several sources. The focus of the analysis here was on what Merriam and Tisdell (2016) call 'making meaning' and making clear how this was carried out.

In order to preserve as much of the 'sense' from the interviews and my first impressions, I made field notes following each one, kept a reflective journal and wrote memos throughout the analysis process; these together form the data set. Interviews were transcribed verbatim at what Kowal and O'Donnell (2014) call a 'basic' level and with 'standard orthography'. Transcribing these myself immediately meant I was immersed in the data and developing 'emergent insights' (Patton 2002).

Initially, hard copies of the interview transcripts were examined and annotated with observations and reflections. The first three interviews were also coded using basic codes for features of apprenticeship from the diagram used in the interview schedule with the codes tracked using NVIVO. This was possible because the interview schedule forms a 'descriptive analytical framework' (Patton 2002). This allowed for some identification as to the degree to which the situated learning model fitted with participants' described learning experiences. It became clear that many features of apprenticeship were richly present in the data so this level of close coding was not carried out on all the

Chapter 3: Research design

transcripts. Discussion in chapter 6 draws on the full data set, and then specifically answers the fourth of the research questions in chapter 7.

Savin-Baden and Major describe the search for themes as being “at the heart of the data analysis process” (2013, p.427) and that “a theme is a unifying or dominant idea in the data” (*ibid.* p.427). Early ‘issues of potential interest’ (Braun and Clarke 2006) inductively identified from the annotated transcripts, memos and my reflective log and broadly thematic were ‘mentoring’, ‘theory and practice’ and ‘workplace’. Hence, all the transcripts were coded to these three themes with NVIVO used to store the transcripts and codes for easy data location. The initial early code set is shown in Table 4 with the code descriptions in Appendix 9. Brief inspection of the further analysis in chapter 5 identifies that some of these codes were later combined, some codes were refined and developed, and some were discarded (conflict between routes and location of learning for example). The inclusion and development of the final themes was based on their importance to the study research questions (Braun and Clarke 2006) and these are further developed and discussed in chapter 6 combined with the analysis undertaken using the analytical framework of situated learning. This is then used to answer the second and third research question in chapter 7.

Table 4 Initial themes and codes

Broad theme	Codes
Theory and practice	Understanding of teacher knowledge
	Content knowledge
	Location of learning
	pedagogical content knowledge
Workplace	Belonging
	Collegial support
	Conflict between routes
	Employment
	Isolation
	Previous workplace experience
	Loyalty
	Relationship with management
	Trainee role
	Treated like a teacher
Mentoring	Mentoring
	Feedback

Maxwell's recommendations for strategies for the analysis of qualitative data include "collecting "rich" data; and using narrative or "connecting approaches to analysis" (2012, p.43). Hence the data was also re-described in shorter narrative case-study form for each interview so that connections within the data and between agency and structures are preserved and irrelevant information eliminated to ensure context was preserved. This allowed for a more holistic recognition of individuals in the process, informing the research question findings. Overall, the approach to analysis is best described in Patton's words as doing my very best with my "full intellect to fairly represent

Chapter 3: Research design

the data and communicate what the data reveal given the purpose of the study” (2002, p.433).

3.10 Summary

This chapter has sought to describe the design, research perspectives and methods used to collect the self-reported data from teachers used to answer the research questions for this study. In summary, it situates the study as interpretive with a mixed-method approach where the quantitative survey precedes the qualitative data collection in an ‘explanatory sequential’ type design. The four questions for the study are justified and the methods of data collection are described in detail, along with methods of analysis. Issues of quality are raised, and these are returned to in chapter 7.

Chapter 4: Analysis of survey results

4.1 Introduction

Section 3.8 discusses the choice of the Teacher Self Efficacy Scale (TSES) (Tschannen-Moran and Woolfolk Hoy 2001) as a suitable tool for this study and details the method used for the data collection. This chapter reports the findings from this survey of NQTs separated into those who had followed school-led teacher preparation routes and those who had followed a university-led route. These findings are analysed using the methods used in other studies in the literature, such as Muijs et al. (2012) and Klassen et al. (2008), in order to carry out comparisons.

4.2 Response rates

Despite considerable efforts on my part to contact over 70 schools from all over England in order to ask them to pass the survey onto NQTs, (as detailed in section 3.8.2) only 38 respondents completed the national survey. Hence, the response rate was extremely low. The addition of the locally distributed survey increased the number of responses by 87 completed surveys making a total of 125 responses. It is difficult to estimate the response rate for the local survey accurately, but, from experience working with local schools, an estimate of the typical number of Newly Qualified suggests that this is a low, but understandable, response rate of approximately 25%.

Given the small response rate from the national survey, the results from both surveys have been combined for the purpose of analysis. The results discussed here therefore are from a group of 67 Newly Qualified Teachers who had followed university-led preparation routes (university-led PGCE and university undergraduate programmes) and 58 who had followed school-led preparation routes (School Direct or SCITT, either as a salaried employee or on a training place). As much data was included in the analysis as possible, leading to adjustments being made for the very small number of respondents who had not fully completed the survey or who had responded using the “prefer not to say” category for some questions. Hence the totals vary slightly.

4.3 Survey results

It should be noted that the survey asked respondents to categorise their teacher preparation as SCITT (School-Centred Initial Teacher Training), School Direct, Teach First, University-led PGCE or 'other', as these were the terms in use nationally at the time and that were considered meaningful to survey participants. They were not asked if their School Direct route was salaried or fee paying (i.e. a training place) and, had they been asked this, the number indicating that they were following the salaried route is likely to have been very small, based on the national figures at the time. Any Teach First and 'other' responses were disregarded and the SCITT and School Direct aggregated to form the 'school-led' category.

Table 5 displays the mean score for each question in the survey for the two groups of respondents, along with comparative data from other research where the mean score is given on a question by question basis.

Despite lower scores by both groups in this study for the item 'How much can you assist families in helping their children do well in school?', the mean scores indicate that Newly Qualified Teachers from both school- and university-led programmes had high levels of self-efficacy across the range of areas surveyed. The highest mean score of 8.0 was given by both groups in this study to the question regarding the extent to which they felt they could 'give alternative explanations and examples when students are confused'. For most questions, the two groups gave similar or identical mean score, although those who had followed university-led programmes scored 0.4 higher on how much they felt they could do to get student to believe that they could do well in school work. The university-led group also scored 0.4 higher for how well they felt that they could establish a classroom management system with each group of students.

Table 5 Mean scores by survey question

	TF08 (Muijs et al. 2012)	TF09 (Muijs et al. 2012)	International (Muijs et al. 2012)	Canada (Klassen et al. 2008)	Singapore (Klassen et al. 2008)	NQTs from Sch-led Combined set (this study)	NQTs from Uni-led combined set (this study)
How much can you do to control disruptive behaviour in the classroom	6.4	6.9	6.1	7.7	6.6	7.4	7.5
How much can you do to motivate students who show low interest in school work?	7.3	6.6	6.4	6.3	6.3	6.7	6.8
How much can you do to get students to believe they can do well in school work?	6.9	7.0	6.4	7.0	6.7	7.2	7.6
How much can you do to help your students to value learning?	7.4	7.0	6.8	6.7	6.5	7.0	6.9
To what extent can you craft good questions for your students?	6.8	7.3	6.8	7.7	7.0	7.7	7.8
How much can you do to get students to follow classroom rules?	6.7	6.8	6.2	7.7	6.7	7.4	7.6
How much can you do to calm a student who is disruptive or noisy?	7.1	6.7	6.4	7.3	6.6	7.1	7.1
How well can you establish a classroom management system with each group of students?	7.1	6.8	6.6	7.8	6.5	7.3	7.7
How much can you use a variety of assessment strategies?	7.0	7.0	6.7	7.7	6.6	7.6	7.5
To what extent can you provide an alternative explanation or example when students are confused?	7.6	7.4	7.0	7.9	7.1	8.0	8.0
How much can you assist families in helping their children do well in school?	5.4	5.4	6.0	5.8	5.7	6.3	6.2
How well can you implement alternative strategies in your classroom?	6.5	6.4	6.5	7.1	6.5	6.9	7.1

4.4 Comparisons

Comparing the survey data from this study with that from other studies is difficult. In part, this is a function of sample sizes, but also composition of samples and sampling methods, which vary widely across studies using the TSES tool.

Other than the data from Muijs et al.'s (2012) survey of Teach First teachers shown in Table 5, I was unable to locate any other published data collected from English teachers using the TSES tool. Muijs et al.'s (2012) study gives data for two cohorts collected in the second year of their two-year programme, labelled as TF08 and TF09 in the table. They also give mean scores for an international sample of NQTs produced as a weighted mean score for each item on the 12 item TSES (Teacher Self-Efficacy Scale) questionnaire using studies reporting data from the U.S.A., Canada, Cyprus, Korea, Belgium, the Netherlands, Norway and Hong Kong.

Table 5 includes mean scores for teachers from Canada and Singapore, as reported in Klassen et al. (2008). This data represents 255 secondary school teachers from Canada and 247 from Singapore. The Canadian teachers were a convenience sample formed from volunteers who were approached at conferences and the Singapore teachers were a stratified sample. Both the Canadian and Singapore samples are therefore formed of teachers of different levels of professional experience, unlike this study where participants had all completed teacher preparation six months previously.

Muijs et al. summarise their efficacy findings as indicating “that respondents tended to see themselves as being able to make a difference in all areas” (2012, p.41). They identify the ability to offer alternative explanations and that of helping students to value their own learning as areas where those following Teach First programmes scored particularly highly. On international comparisons they say that those on Teach First programmes:

scored higher in most areas, and in particular in motivating students and classroom management factors (2008 survey) and in controlling behaviour (2009 survey). They scored lower on assisting families (Muijs et al. 2012, p.41).

Of the Canadian and Singapore results, Klassen et al. (2009) say that the Canadian scores are higher than those from Singapore.

Comparing the results from this study with the others shown in Table 8 indicates comparable levels of self-efficacy. In four areas those who had followed university-led teacher preparation programmes had the highest mean score of all: how much they believed they could 'do to get students to believe they could do well at school'; the extent to which they believed they could 'craft good questions'; the extent to which they believed they could 'provide an alternative explanation or example' (a score shared with those who had followed school-led programmes); and how well they felt they were 'able to implement alternative strategies in their classroom'. The mean score for those from the school-led group had a higher mean score than the others in the table on the extent to which they felt they could 'assist families', although it should be noted that this is the lowest scoring question for all the reported survey data.

Overall, the results indicate that the English NQTs from both types of preparation route had high levels of self-efficacy, even when compared to more experienced teachers internationally. Hence, the NQTs from both main types of route in the survey reported here felt confident in their own abilities in the classroom. Whether, and how self-efficacy changes over time as teachers continue in the profession is interesting to consider, but beyond the scope of this study.

4.5 Findings by factor

Tschannen-Moran and Woolfolk Hoy (2001) describe the factor analysis undertaken when they developed the TSES survey instrument. This identified three subscale scores they claim can be used to assess aspects of teachers' self-efficacy and that these "represent the richness of teachers' work lives and the requirements of good teaching" (Tschannen-Moran and Woolfolk Hoy 2001, p.801). As reported in section 3.8.4, the three factors are: efficacy in instructional practice (survey questions 5, 9, 10, 12); efficacy in classroom management (survey questions 1, 6, 7, 8); and efficacy in student engagement (survey questions 2, 3, 4, 11). Table 6 shows the Cronbach's alpha coefficients for the reliability overall and for the three factors calculated using SPSS for this

Chapter 4: Analysis of survey results

study and those from Tschannen-Moran and Woolfolk Hoy (2001). These show that the subscales and total scale are internally consistent and reliable for the data reported here, and, other than for 'efficacy in student engagement', the same or better than in the original study. Examining the alpha scores in more detail, both the 'efficacy in instructional practice' and 'efficacy in classroom management' would be lower if any one item is removed. The 'efficacy in student engagement' increases to 0.862 if the item 'How much can you assist families in helping their children do well in school?' is removed, which is the item scored lowest by participants in this study. My experience as a teacher educator suggests that inexperienced teachers are likely to be less confident in this area, and combined with the earlier observation that this item scored lowest for all studies suggests that it is unsurprising that this item fits less well. However, as the alpha coefficient is acceptable with it included, it was left in so that the factors were calculated in the same way as in other studies and could therefore be compared.

Table 6 Cronbach's alpha coefficients

	Alpha score for this study	Tschannen-Moran and Woolfolk Hoy (2001) 12-item scale alpha
Overall score	0.93	0.90
Efficacy in instructional practice	0.81	0.81
Efficacy in classroom management	0.92	0.86
Efficacy in student engagement	0.81	0.86

Table 7 gives the mean score overall and for each of the three factors for this study and for others from the literature where the data is reported in this format. In the survey reported here, there is little difference in the mean scores by factor and for overall mean score from NQTs who had followed university-led preparation programmes and those who had followed school-led programmes. In each case, those from the university-led group had a marginally higher mean score and those from the school-led group had a greater standard deviation.

Table 10 displays data from other sources reported in terms of the mean and standard deviation for the three efficacy factors. It should be noted that Duffin et al.'s (2012) data was collected from pre-service teachers in the U.S.A.

beginning their undergraduate programme using the 24-item TSES tool, rather than the 12-item tool used in this study. There were 272 in sample 1 from one university and 180 in sample 2, from a different university, although the paper does not indicate whether they were preparing to teach at elementary, middle or high school level. Duffin et al. summarise their findings as showing that pre-service teachers “do not differentiate between the various aspects of their teaching captured by the TSES” (2012, p.831). This echoes Tschannen-Moran and Woolfolk Hoy’s finding that the “subscale scores may have little meaning for prospective teachers who have yet to assume real teaching responsibilities” (2001, p.801).

Heneman et al.’s (2006) data was collected from 508 elementary, middle and high school teachers with different levels of professional experience. All the teachers in one school district were sent the survey. They identify the ‘efficacy in student engagement’ factor as having the lowest mean score in their survey. The data from Tschannen-Moran and Woolfolk Hoy (2001) in Table 10 was collected from 410 teachers, including some pre-service teachers from three universities and some teacher volunteers. The teachers again had different levels of professional experience, and the sample included teachers at elementary, middle and high school. Also reported in Table 7 is data from the work of Murshidi et al. (2006) regarding the self-efficacy of beginning teachers in Sarawak in Malaysia. This was collected as a stratified random sample of 328 beginning teachers who were given the 24-item TSES, although the paper gives no indication as to whether these were elementary, middle or high school teachers.

Table 7 Mean scores by factor

	Duffin et al. (2012) sample 1		Duffin et al. (2012) Sample 2		Heneman et al. (2006)		Tschannen-Moran and Woolfolk Hoy (2001)		Murshidi et al. (2006)		Wang et al. (2015)		Knoblauch & Chase (2015)		NQTs from uni-led combined set (this study)		NQTs from sch-led combined set (this study)	
	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD
Overall score	6.69	1.10	5.87	1.38	6.89	0.94	7.1	0.98	6.57	0.80	N/A	N/A	7.43	0.86	7.32	1.30	7.23	1.63
Efficacy in instructional practice	6.61	1.18	5.74	1.50	7.14	1.03	7.3	1.2	6.74	0.77	7.58	0.92	7.73	0.91	6.89	1.41	6.80	1.65
Efficacy in classroom management	6.69	1.23	6.1	1.49	7.42	1.18	6.7	1.2	6.64	0.93	7.40	1.12	7.45	1.04	7.49	1.15	7.30	1.64
Efficacy in student engagement	6.76	1.14	5.76	1.42	6.12	1.28	7.2	1.2	6.34	0.94	6.67	1.18	7.13	1.13	7.58	1.20	7.56	1.51

Comparing the results of this study with the others displayed in Table 7 it can be seen that the overall mean scores for NQTs from both those who had followed school-led teacher preparation programmes and those who had followed university-led programmes are comparable with those from studies in the literature. Both groups of English NQTs have mean factor scores that are higher than those for teachers and pre-service teachers in the other studies for 'efficacy in classroom management' and 'efficacy in student engagement', although the participants in Knoblauch & Chase's (2015) study recorded the highest mean factor score for 'efficacy in instructional practice'. The scores from the work of Knoblauch and Chase (2015) are notable in that this is a relatively large study (368 participants) of pre-service teachers from elementary, middle and high schools. The standard deviation is notable in the case of the NQTs who had followed school-led routes in the survey for the study reported here as it is, in all cases, greater than the standard deviation in any of the other studies.

Some further comparison is also possible with the work of Fox and Peters (2013) and Unruh and Holt (2010), which is shown in Table 8. These results are given as a total composite score rather than as a mean overall score or a score for factors or for individual questions. Fox & Peters' (2013) data was collected from 288 teachers from elementary and secondary schools in their first year of teaching using the 24-item TSES tool using an online survey sent out by email. That of Unruh and Holt (2010) is from 86 Newly Qualified Teachers from elementary and secondary schools.

Table 8 Total composite scores

	Mean	SD
Traditional (Fox & Peters)	173.6	21.6
'Alternatively certified' (Fox & Peters)	169.1	24.09
Traditional (Unruh & Holt)	169.2	23.08
'Alternatively certified' (Unruh & Holt)	162	29.56
NQTs from university –led routes (this study)	176.4	18.5
NQTs from school-led routes (this study)	174.2	30.0

Both Fox & Peter's (2013) data and that from Unruh and Holt (2010) show the same pattern as that in the survey reported here in that those teachers who had followed a non-traditional preparation programme had a lower mean score and a greater standard deviation than those who had followed a university-led 'traditional' type of preparation programme. However, it should be noted that both Fox & Peters and Unruh & Holt found that the difference between the two groups in their respective surveys was not statistically significant.

4.6 Interpretation of results

The results reported here clearly show that the English NQTs surveyed had high levels of self-efficacy when compared with teachers participating in other studies. In common with other studies, those who had followed university-led teacher preparation programmes scored slightly more highly than those who had followed other types of preparation programmes.

Of more importance is a consistent finding indicated by the standard deviations. The variation in self-efficacy is greater for those who had followed school-led programmes compared with those who had followed university-led programmes. In Heneman et al.'s view, the size of these standard deviations is of importance as, when commenting on their own results, they say that standard deviations of above 1.0 indicated "some degree of variability in scores" (2006, p.11).

Overall, self-efficacy scores should be interpreted with a degree of caution. Heneman et al. (2006) found that responses were given using only a restricted range of values and that only very small percentages of the results were below

the mid-points of the efficacy scales. They suggest that this may be due to the nature of the measuring instrument, or social desirability bias, or that it might be a genuine result:

brought about by a combination of self-selection into teaching by those with a high TSE [Teacher Self Efficacy], attrition out of teaching by those with a low TSE, and favourable experiences while teaching that enhance TSE (Heneman et al. 2006, p.13).

Such caution should be exercised with the data reported here as well, as calculating the percentage of scores below the mid-point of the scales (i.e. 5) identified that, in almost all cases, less than 5% of respondents used the lower part of the scale. For those who had followed university-led programmes the highest percentage using the lower half of the scale was only 7% and for those who had followed school-led programmes it was 14%.

4.7 Implications

In the sample of English NQTs reported on in this study the three key findings are:

- High mean scores for self-efficacy, regardless of preparation route;
- Mean self-efficacy scores that are marginally higher for those who had followed university-led preparation routes compared with those who had followed school-led routes; and
- Variation in mean self-efficacy scores greater for those that had followed school-led teacher preparation programmes compared with those who had followed university-led programmes.

It should be noted that these are potentially new findings, as self-efficacy data collected using the TSES tool comparing English teacher preparation routes has not been made publicly available, although Muijs et al.'s (2012) study compares Teach First participants (an employment-led route) with international data. Other studies compare undergraduate programmes at different universities (Duffin et al. 2012), college and university programmes (Murshidi et al. 2006) and 'traditional' and 'alternatively certified' teachers in the U.S.A. (Fox and Peters 2013). In some of the other studies reported here it is not made clear what type of preparation route was followed, and in the case of studies from the U.S.A. the designation of 'alternative certification' has several

Chapter 4: Analysis of survey results

interpretations and includes routes with considerable variation in characteristics. These factors mean that a degree of caution should be undertaken when making comparisons. It may be the case that there is more consistency in the sample reported here, as compared with some of the other studies, given the majority of the respondents were local to one another and may have undertaken teacher preparation on the same programme.

4.8 The outcomes of teacher preparation

Ashton and Webb identify that efficacy may be important in that if schools can “sustain teachers’ sense of efficacy, then teachers may be more motivated to teach and their students more motivated to learn” (1986, p.95).

There are two shortcomings regarding the efficacy data collected in this study. Firstly, the analysis only distinguishes between school-led and university-led programmes whereas the teacher interviews focused more specifically on those following an employment-led route, which is a specific type of school-led route. The data set for the efficacy survey was too small for meaningful analysis of those on employment-led routes as a separate group. The second shortcoming relates to the nature of the self-efficacy tool. By their very nature the self-efficacy survey questions are practice-oriented and this could be considered to be a partial outcome measure for teacher preparation, and one that perhaps preferences practise-oriented preparation routes. The interview data clearly suggests that those who had followed an employment-led route felt that they were better prepared for their NQT year than those who had followed the university-led route (see section 5.2.3), which is not surprising given that those on employment-led routes are in school for more time and do more class teaching than those on non-employment routes. The teacher educator who gave the pilot interview identified why this may be the case:

Those on predominantly school-based routes... will often start their NQT year more confident in the classroom. They've built up those routines of all sorts that we know experienced teachers think in terms of, so their knowledge and skills in the classroom are often less fragmented than those coming from a HEI-led PGCE.

Griffiths (2007), in a study of those following an employment-based route to primary teaching found that, whilst taking on a lot of responsibility early on as

a pre-service teacher was additional pressure, participants felt that, looking back, it had been of benefit.

In England, a key measure of outcome from teacher preparation is competency measured against eight broad 'Teachers' Standards' (Department for Education 2011). Table 9 identifies that the self-efficacy questions correlate well with the English Teachers' Standards and that there is a particular focus on behaviour management in the self-efficacy survey.

Table 9 Comparison of self-efficacy measure with Teachers' Standards

	Self-efficacy survey questions (Tschannen-Moran et al. 1998)	English Teachers' Standards (Department for Education 2011)
1	How much can you do to control disruptive behaviour in the classroom?	Manage behaviour effectively to ensure a good and safe learning environment (TS7)
2	How much can you do to motivate students who show low interest in school work?	Set high expectations which inspire, motivate and challenge pupils (TS1)
3	How much can you do to get students to believe that they can do well in school work?	Set high expectations which inspire, motivate and challenge pupils (TS1) Promote good progress and outcomes by pupils (TS2)
4	How much can you do to help your students value learning?	Set high expectations which inspire, motivate and challenge pupils (TS1) Promote good progress and outcomes by pupils (TS2)
5	To what extent can you craft good questions for your students?	Plan and teach well structured lessons (TS4)
6	How much can you do to get children to follow classroom rules?	Manage behaviour effectively to ensure a good and safe learning environment (TS7)
7	How much can you do to calm a student who is disruptive or noisy?	Manage behaviour effectively to ensure a good and safe learning environment (TS7)
8	How well can you establish a classroom management system with each group of students?	Manage behaviour effectively to ensure a good and safe learning environment (TS7)
9	How much can you use a variety of assessment strategies?	Make accurate and productive use of assessment (TS6)

Chapter 4: Analysis of survey results

10	To what extent can you provide an alternative explanation or example when students are confused?	Demonstrate good subject and curriculum knowledge (TS3)
11	How can you assist families in helping their children do well at school?	Fulfil wider professional responsibilities (TS8)
12	How well can you implement alternative strategies in your classroom?	Adapt teaching to respond to the strengths and needs of all pupils (TS5)

Ashton and Webb (1986) suggest that a number of classroom factors affect teachers' sense of self-efficacy including student characteristics; teacher characteristics; teacher ideology; teacher identity; role definition; and class size. They further suggest that "teachers' efficacy attitudes are situation-specific" (Ashton and Webb 1986, p.138).

In the pilot interview, the teacher educator said:

I do believe quite deeply, that the benefits of the less immediate parts of this initial training that beginner teachers can get in HE-led PGCEs and in many places in school-led ones don't kick in until they are established teachers - especially a lot of the horizon knowledge and the alternative ways of thinking about things and the skills for reading, evaluating more widely particularly research based stuff, their general informed criticality, I don't think they have space to operationalise until they are established in the classroom, very often.

With the national award of QTS recognising the competences shown in Table 9 it would seem that whilst programmes are recognised as differing in many ways, and often by design, value is only given to a limited set of outcomes.

4.9 Conclusions

That self-efficacy is important is clear from the literature. In section 2.6 self-efficacy is identified as a good indicator of teacher effectiveness. Tschannen-Moran et al. argue that the literature supports a view that "once efficacy beliefs are established, they seem somewhat resistant to change" (1998, p.235). They go on to suggest that "efficacious beginning teachers rated the quality of their

preparation higher and the difficulty of teaching lower than those who were less efficacious" (*ibid.* p.236).

Chapter 5: Analysis of interview data

5.1 Introduction

The early stages of the data analysis in section 3.9.5 are described as involving the coding of the first three interviews using an analytic framework based on situated learning, the identification of ‘mentoring’, ‘theory and practice’ and ‘workplace’ as issues of interest or tentative themes with some tentative sub-codes and some narrative studies for each teacher interviewee. The earlier section goes on to say that the next stage is to identify and develop the final themes based on their importance to the study research questions; this is the further analysis undertaken in this chapter. This is the part of the analysis that goes beyond descriptive coding to the analytic coding Richards describes as “coding that comes from interpretation and reflection on meaning” (2015, p.94) and hence the meaning-making needed for the research questions and research perspective used in this study.

This chapter also provides the element of ‘thick description’ that Patton says “provides the foundation for qualitative analysis and reporting” (2002, p.437). These are supported by the series of pen portraits in Appendix 8. In the following sections the italics indicate direct quotes from the interviewees, which are used as illustrative examples from the data. In order to protect identities names have been changed, as have some identifying characteristics where they might lead to the identification of individuals and/or settings. Text in square brackets is exemplification added for clarification purposes.

5.2 Analysis

The three areas of interest identified from the initial coding (see section 3.9.5) as aspects of the pre-service teacher experience on an employment-led programme connected with relationships were:

- the curriculum mentoring relationship;
- the relationship between theory and practice;
- the culture of, and relationships in, the workplace.

All the sub-codes used (see section 3.9.5) cluster under these three themes. Mentoring within the curriculum subject is identified because of its centrality

Chapter 5: Analysis of interview data

both in the day to day experience in school for pre-service teachers but also because of its importance in situated learning as the enactment of the expert-novice relationship. One aspect of the mentor role is observing teaching and giving feedback so this is also under consideration at this point. The second aspect listed above includes the relationship between content knowledge and pedagogical content knowledge (Shulman 1987), identified as an area of concern by some interviewees, and interviewees' understandings of the professional knowledge needed to become a teacher. With regard to the third aspect, interviewees were asked very specifically about whether they saw their status as a trainee or an employee. This line of questioning arose from the first pilot interview which sharpened the focus on those pre-service teachers who were on employment-led programmes and on the degree to which they were supernumerary in their employment. Their responses to this line of questioning led to identification of this aspect, which further explores status and workplace culture in the development of teacher identity in the pre-service teacher.

5.2.1 The curriculum mentoring relationship

The relationship between curriculum subject mentor (as distinct from the professional mentor who is responsible for all pre-service teachers in a school) and pre-service teacher was identified by teachers as having had considerable impact on their learning in their teacher preparation. In some interviews participants talked quite extensively about their mentors or about mentoring activities. The subject-specific mentor, or curriculum mentor, takes the role of 'expert' in the situated learning model with the pre-service teacher being the 'novice', with the intention that the mentor provides assistance and supervision, expertise and opportunities for learning. Unless indicated otherwise, references to 'mentor' in this section are to the curriculum mentor.

In practice, the relationship between curriculum mentor and pre-service teacher did not always work as an expert-novice relationship. Elaine did not respect her mentor and did not see her as having credibility as a teacher:

She's at best a good teacher, and at worst not – satisfactory, basically, overall – and how can a satisfactory teacher really help a person reflect and improve?....she had no idea....

Elaine also viewed another member of staff as a more appropriate mentor because “*she, to me, she was an outstanding maths teacher*”, had previously been a head of department and had previous mentoring experience. All these were characteristics she did not view her allocated mentor as having and she did not understand why she was not given more opportunity to work with this other teacher. Sally described the relationship with her mentor as “*difficult*”. For both Sally and Elaine, their difficulties with their mentors had a major influence on their teacher preparation; it was a repeated theme in both their interviews. Both identified a mis-match between their expectations prior to the programme regarding the support they would receive in school and the support they perceived themselves as having received in practice. Both said that they expected to have opportunities to observe the practice of others, to be observed teaching and to be given support and advice (but did not specify what this might mean in practice or from where they had gained these expectations).

In Elaine’s case, looking back she was critical:

They started me off and progressed me too quickly. They had more confidence in me than they should have done at the beginning.

My reading of this is that she started the programme by feeling let down by the senior staff. She explained in her interview that the head of department and deputy head who appointed her both left before she started at the school, and the job she said she had been “*promised*” at the end of the training year was no longer hers by right.

For Sally, early disappointment also helped to create a hurdle that she found difficult to overcome. She described how she started at school with a huge teaching load and a tutor group and that “*it was just too much*”. After the headteacher “*refused*” to reduce her teaching load she “*resigned*” and was found another school. She felt she “*started behind*” and was “*feeling like I’d basically lost a month of training*”. In Sally’s view, her mentor also incorrectly diagnosed her difficulty and inadvertently made the situation worse:

my mentor decided ... that possibly my lack of understanding had come from going to the resources the department already had and trying to get my head around those so from then on I needed to plan lessons from scratch myself and see if that helped ... It didn’t help... I just cried, I didn’t get it ... I didn’t know how to plan a lesson.

Chapter 5: Analysis of interview data

Elaine viewed her mentor's response to her difficulties as inappropriate and unhelpful:

they saw I was struggling and then just gave me more and more difficult behaved classes, which just made it worse not better.

For both these teachers, long-standing problematic aspects of their practice – in Sally's case pedagogical content knowledge difficulties and in Elaine's with behaviour management – proved difficult to resolve.

Another teacher who had difficulty with his mentor was Harry, a computer science teacher, who described his relationship with his mentor as:

... more of a collaborative team work position where we were both as clueless as each other [about the computer science curriculum content] ... and working as a team to make sure we did the best we could by the kids.

In a similar manner to Elaine, Harry suggested that the mentor needs to be “*the best person in the department*” but went on to identify the best teacher in the department as someone other than his mentor. Harry's expectations of his programme, like both Elaine's and Sally's, were different to the reality he felt he experienced:

I think its fallacy for me was that I assumed it was a training, training and teaching year. I thought I would get taught to be a teacher. What I found is that I self-taught myself to be a teacher and, and that.... I thought it would be, I'd be supernumerary - I'd just spend that whole year learning the subject matter, watching good teachers, writing my essays for my PGCE, filling out my book, you know, I assumed it would be a, an educational year, where it was a practical year, and, and, far harder than I ever thought it would be.

Hence Harry had unfulfilled expectations, he described himself as the “*subject matter expert*” in the school and identified that he found his mentor wanting in some respects: “*There were other teachers that I, that I took more professional support from i.e. I would ask to observe specific teachers that I knew were closer to my teaching style*”. All these factors led to what he said was “*the hardest year of my life*” and, whilst he completed the programme successfully, he chose not to pursue a career in teaching.

Other interviewees had relationships with their mentors that presented difficulties but they were able to overcome these, at least to some extent. Hence Fiona told how she requested a change of mentor and described having to do this as “*horrible, as a newbie*”. Pamela also had a difficult relationship with her mentor that she described as being the result of a “*little bit of difference in personalities*”. She described having a clear expectation about the “*nurturing*” she expected, but that felt she did not receive this from her mentor. Her solution had been to work round this difficulty by seeking the support she felt she needed from another member of staff.

Jack’s curriculum mentor was a member of the senior leadership team but he said that “*probably due to the numerous things she was doing we didn’t get enough time together, in my opinion, regularly to discuss things*”. However, he taught a class with the professional mentor, who said “*he wasn’t to be disturbed because of my development...he put in a slot on my timetable*” and who Jack described as acting as both professional and curriculum mentor. For Jack, things came to a head before Christmas in his teacher preparation year when he shared his struggles with his university tutor. He reflected on the outcome of discussing his difficulties with his university tutor, saying:

They [i.e. the school] can be doing some stuff wrong as well, you know, I almost felt guilty about that, in a way, ...I think, well I know [university tutor] had some pretty frank conversations with professional and curriculum mentor. They changed up, to a degree, to a degree.

Jack managed to turn things round, successfully completed the programme and took up a teaching post.

Not all of those interviewed had difficult relationships with their mentors. Philip’s interview identified his relationship with his mentor as unproblematic. They met weekly and he said “*they kind of just sort of stuck me in*”. He inferred from this that he would “*be fine*” and his sense of self-confidence and of his own competence was evident in his interview. Both Mark and Anna had more ‘passive’ relationships with their mentors. Mark saw his mentor as another colleague to work with and Anna described being content to be left to her own devices with her mentor mainly managing the administrative aspects of his role.

Chapter 5: Analysis of interview data

Others described more positive and supportive relationships with their mentors. Of her department, Claire said *“I felt, yeah, the junior member really”*, she felt supported and had a high degree of respect for the other teachers in the department, *“I’d do the routines that the teachers recommended becausethat’s what I sort of thought would be best sort of thing”*. Marie said *“all the teachers I worked with were, were fantastic”*, and Kate described herself as having been *“superbly”* supported. Stu also appreciated the support his mentor provided and was reflective about the mentoring he received:

at the time it was “oh are you interested at all in my development?” sort of thing but it was his way of sort of allowing me to learn and make my own mistakes without feeling like it was... things were going well or they were behaving terribly because he was looking at them and getting them to shut up with his seniority um, so I think that was, that was kind of his approach and it certainly, I think, looking back, it has benefitted me more, probably.

Relationships between pre-service teacher and mentor can have significant impact on the experience and confidence long-term of the pre-service teacher. Elaine, for example, said of herself:

I’m still not sure I want to be a teacher, not because I don’t think I can be a teacher, just because it started off so badly....there’s massive missing bits.

Sally described her experience as *“incredibly difficult”* and *“traumatic”* and Harry, who had served in the Army in Afghanistan said it was *“the hardest year of my life, um, and I’ve done lots of hard things, to be honest”*. Both were critical of the mentoring they received, as previously noted.

The other aspect of mentoring found in the transcript relates to lesson observation and subsequent feedback. In common with many other programmes, this teacher preparation programme has a requirement that all pre-service teachers receive regular lesson observation with written feedback using a standard proforma and post-observation discussion. A key part of the role of the mentor, therefore, is observing the pre-service teacher in the classroom and giving feedback. Some of those interviewed raised issues about this aspect of their programme.

Those who had been supernumerary, even just for the first part of their placement, usually got informal feedback in the early part of the placement, although one of Elaine's key complaints was that she got infrequent or no feedback on her teaching as "*the class teachers were just not bothering to come in*". This contrasts with the views of other pre-service teachers who were either content with infrequent visits to their classroom by mentors, or even expected to receive little feedback on their teaching. Philip said, "*Being not watched all the time, it's really useful because you can try your own things and say "right, that was really awful" and condemn it to the rubbish tip*". It is not clear whether he saw such lessons as opportunities for learning, and whether he believed he had all the skills needed to learn from teaching lessons without the support of another, more experienced, teacher. Stu asserted that he found more benefit from what might be described as incremental self-improvement than from "*having someone come in and suggest a strategy*". Anna supported Philip's views that not 'being watched' all the time was good:

If you had a bad day then it wasn't the be all and end all, it wasn't going to be completely examined under the microscope.

Harry agreed with this approach by suggesting he would not have liked to have had "*someone looking over my shoulder the whole time*".

However, many teachers saw formal lesson observations as having been high stakes and also recognised that, when things went well, they felt good about their teaching and progress. For instance, Jack described:

When stuff worked and there was somebody watching, I could see a sort of like wry smile that they're trying to contain, as they're writing the observation form. That felt amazing.

Anna, in particular, saw the process of being observed and receiving feedback on her teaching as being primarily concerned with assessment and the making of judgements, saying "*they'd come in and look at what I did*", describing the process as "*inspecting*" and that "*hopefully, it would have been the right thing*". Some of those interviewed expressed a keen awareness of how 'good' a teacher they were during their teacher preparation, with reference to the grading system commonly in use at the time. Hence, Philip talked about the "*pressure of needing to be 'good'*" and Fiona described getting "*'good' and 'outstanding'*" in her lesson observations.

Chapter 5: Analysis of interview data

Words used by some of the teachers to describe feedback they received on lessons included “*accurate*”, “*amazing*”, “*constructive*”, “*really useful*”, “*really, really concrete*” and “*positive*”. However, Elaine’s claim was that, because she would only get feedback on her lessons when she was being formally observed, she used these opportunities to try new techniques specifically to obtain feedback on how to implement them. In her eyes this meant that “*you don’t do very well because it’s the first time you’ve tried something*”. When Marie said that her feedback always “*felt really constructive*” and that she “*never felt...I was under attack*”; perhaps she was aware that this could have been her experience in other circumstances.

Some teachers contrasted their experiences of lesson observation feedback in their short second placement as compared with their main placement. Mark indicated that he particularly valued the “*regular critical feedback*” from his second placement where the teacher he was working with talked to him “*about how it could be better*” and challenged him “*to be better at teaching*” and where he “*got it back immediately afterwards and that was really important for allowing me to work out how to improve*”. He admitted that he did not receive feedback “*in quite the same way*” in his main placement school, where he described receiving feedback from teachers who were not specialists in his subject and that “*sometimes on my teaching, I wouldn’t get a lot of feedback on it*”. He also made no specific references to his mentor observing him.

Anna also discussed the very different approach to observation and feedback in her second placement. Like Mark, she was fully supernumerary in her second placement and, like him, she had an experienced subject specialist in her classes with her for the whole time who gave her lots of feedback. She said “*it was quite nice but six weeks was long enough*” and that “*she could take some criticism then*”. Later in the interview she described this approach as “*mollycoddling*”, despite admitting that she ‘learnt more’ in six weeks than she had during more than a term in her main placement. She justified the use of the word ‘mollycoddling’ by explaining that she thought that this approach had undermined the confidence of another pre-service teacher she knew. Kate had a contrasting experience of mentoring in her second placement as she said that the mentor had “*started off by sitting in the classroom with me,...but very quickly left*”. She said that that the mentor then had sufficient confidence in her to leave her to teach independently.

Unsurprisingly, quality and quantity were both issues raised by interviewees, and Pamela said that she struggled “*with being told something wasn’t working but not being given advice on how to make that better*”. Sally was supernumerary after she changed schools early on and, whilst she was grateful for all the feedback she was getting on her teaching she said that she:

Found the process quite difficult, you know, because of course it’s constructive, but of course I wasn’t very good, and I wasn’t getting it...I felt like I wasn’t becoming any better...I know what you did well and how to improve next time is how you learn, but there was just so much coming my way....I just found over time it was just demoralising....far too much to take in.

Whilst the differences between the experiences of teachers such as Elaine and Philip may be about expectations, they may also reflect an underpinning model of learning whereby for some pre-service teachers, the process of learning to teach is either seen as one of ‘having a go’ or as ‘seeing what works’. Elaine’s experiences identify that either agreeing the expectations and responsibilities of both parties in advance, or at least knowing what is expected and what will be provided, may be an important factor in both pre-service teacher satisfaction with their preparation programme and possibly programme outcomes for the individual.

The critical nature of the relationship between pre-service teacher and curriculum mentor was best summed up by Kate when she said “*I must admit if things had gone really wrong You can’t go to your mentor because the chances are it is with that person anyway*”. The teachers interviewed had striking variation in their relationships with and expectations of their mentors and a wide range of ways in which they managed this relationship. That this relationship is complex is not in doubt, and this study indicates that this may be even more so for those on employment-led routes because of their dual status as employee and learner. This emerging finding connects to the analysis in section 5.2.3 and is returned to in later chapters. A great deal of expectation rests on many mentors along with challenges regarding managing a relationship that, according to the interview data, can be complex and intense. There is a need to manage expectations, both from those pre-service teachers who are ‘needy’ or who expect a great deal of support, and from those who are highly independent and have few expectations regarding support, yet require

Chapter 5: Analysis of interview data

it. The degree of skill required in supporting those on employment-led routes may be higher than that required to support those on other routes, and aspects of culture and relationships in the workplace relevant to this are discussed further in Section 5.2.3.

5.2.2 The relationship between theory and practice

Two dimensions for the relationships between theory and practice are explored here. The first interprets the theme broadly as being concerned with the ‘content knowledge’ pre-service teachers need as being theory and ‘pedagogical content knowledge’ being practice (Shulman 1987). The discussion here reflects my understanding that the relationship between content knowledge and the pre-service teacher is enacted in slightly different ways depending on the curriculum subject being taught and the expectation that some teachers will routinely teach across a broader field rather than only within their subject specialism.

With regard to their content knowledge, some teachers felt that they had ‘gaps’ in their content knowledge when they started their teacher preparation, and one said, for example, “*there are other aspects of computing that really were quite new*”. Another implied that she had under-anticipated the importance of having this knowledge at a higher level than she was preparing to teach:

I did maths A level, nearly twenty-five years ago....even though I remembered a lot of the GCSE stuff.....that was probably the bit that was missing.

Pamela said “*most people have specialisms, gaps...*” and went on to identify the value of good content knowledge, saying that it had given her “*confidence*”, and having taught other subjects she felt it keenly when she lacked the content knowledge she felt she needed.

Harry’s whole experience of his teacher preparation for computer science was coloured by his difficulties with content knowledge. He started his teacher preparation knowing that there were some aspects of his content knowledge in computing that were absent and having found it difficult to study these independently beforehand. His difficulties were exacerbated by the computing content taught in school in having undergone recent radical change and where,

“it was all more like I was self-teaching myself the syllabus as I was going along but moreover than that I was teaching the teachers the syllabus as well”. He also said *“nobody was the subject matter expert in computing apart from me, which was weird because I wasn’t a computer scientist*. He also found himself to be the content knowledge expert in his second placement, and of his mentor in his first placement he said, *“we were both as clueless as each other”*. His situation was further complicated by a mis-match of the school expectations and his own, illustrated by the quote from him used in section 5.2.1.

One teacher had a different difficulty with her content knowledge. She chose to teach history with a degree in International Relations and she knew that this was not the usual practice for the institutions concerned. However, she was unaware of the potential implications consequent to this. She knew that a history teacher would not have knowledge of all periods of history in the curriculum prior to teacher preparation and so she had not thought that not having a degree in the subject would be an issue. Her problem was that she failed to understand that content knowledge in history has both a factual element and a skills element. This was in contrast to Marie’s appreciation that her deeper knowledge of her specialist subject of biology added to children’s learning and understanding:

with biology you know, when a kid comes out with an observation that may seem absolutely irrelevant you think “ah! Right yeah, you can make a link here” and you can just, you, you can lead it, you can follow the class a bit more.

The nature of secondary school education means that some teachers teach almost entirely within their subject specialism but others need to teach a broader range of subjects across related programmes, for example sciences or humanities. Kate, for example, was called upon to teach history which she did not study at school beyond the age of 14 and, in fact, ended up having to teach history as an NQT in order to secure a job at the school where she wanted to teach, *“I was only one page ahead of them in the textbook!”* Her view was that, *“I’m training to be a teacher, I’m not training to be a geography teacher, although that will be my subject, hopefully, at some point”*. The experience of Stu, a biology graduate, of teaching across science was different. He said that:

Chapter 5: Analysis of interview data

physics is the subject that I find easiest to teach because I know what they are going to get caught up on, I can more easily spot those misconceptions, all those hurdles, sometimes I think when I teach biology if something is so ingrained in my head because of the fact that I've done it for so long that when a kid doesn't know....I'm like "how can you not know that? - it's obvious!" and ... the challenge was for me, um, was breaking down these very complex ideas into the key things that make them up.... what has made me better at teaching those is the fact that I've had to really drill down to what are the key ideas....

Hence, his experience was that he found it easier to teach physics, which he had to work to learn himself, despite some previous knowledge in this field.

The need for pedagogical content knowledge is discussed in different ways by the teachers interviewed. Marie, a physics teacher, recognised the need for *"more than just subject knowledge"* and said *"it's one thing knowing it but it's another thing knowing it well enough to teach it and knowing - how do you approach this?"* This need for both types of knowledge was echoed by Claire, a French teacher, when she said *"I think you definitely needed both...to understand how the subject works"*. Marie went on to suggest that her learning experiences with her mentor had interwoven content knowledge and aspects of pedagogical content knowledge: *"we'd not only be doing experiments... good advice on how you get a smooth running experiment"*.

For some, pedagogical content knowledge was a significant concern; Pamela and Anna both identified that they would have liked more training in this area. What was provided in schools was often very practical in nature and described by some of the teachers as *"tips"*, *"just do this"*, *"resources"* and that they tried *"different things out on them and see what worked well"*, focused on immediate concerns and provided 'just in time'.

Some interviewees were able to articulate the connection between content knowledge and pedagogical content knowledge, and one suggested that if she had done a Subject Knowledge Enhancement course prior to her teacher preparation it would have helped her with both types of content knowledge. Pamela, a history teacher, said that *"you can't address misconceptions if you don't have subject knowledge because you're not aware of what they're*

missing” and another “*are you trying to teach them to make a game or are you trying to teach them...the concept behind it?*” However, when I asked another interviewee to tell me how she had learnt some specific examples of subject pedagogy she said:

I'm not sure....I don't know....I guess by observing... I'm implicitly aware that I do them but I'm not explicitly aware of how I know those things, or how I do them.

Others were also unable to explicitly recognise pedagogical content knowledge so Kate, a geography teacher, for example said, “*in terms of misconceptions, it's something I naturally do, if something's wrong then I'll fix it with somebody*”. As a teacher educator I would view this as a somewhat impoverished view of this important aspect of pedagogical content knowledge.

Anna, a mathematics teacher, liked the independence and ‘in at the deep end’ approach of her teacher preparation programme which she described as “*so for the first couple of weeks, or three weeks, were probably really winging it*”. However, she said she struggled to find “*an idea of how to approach it [i.e. a specific topic], sort of dependencies, to then move on to this topic and what would follow on after that*” and therefore lacked the pedagogical content knowledge to operate in this way. She discovered that those following Teach First (another teacher preparation programme) had a book that provided this sort of information for mathematics, which she said she would have liked to have had a copy of when she started. Her view was that pedagogical content knowledge is quite fixed and external to experience and individuals and, again, as a teacher educator, this suggests to me a simplistic and impoverished view of pedagogical content knowledge.

The other dimension of the relationship between theory and practice discussed here concerns the teachers’ understandings of the professional knowledge needed to become a teacher. Section 2.2 discussed models of teaching, teacher learning and teacher preparation and section 2.2.2 the professional knowledge of teachers specifically. The interviews were analysed to identify participants’ views on the nature of teaching, what they thought they needed to learn to become a teacher and how and where they thought this was learnt. Wringe (2012) suggests three different conceptions of ‘know-how’: learning of procedures, acquisition of skills, and education; these provide identifiers for this aspect of the analysis. The data was analysed by creating short

Chapter 5: Analysis of interview data

descriptions from the interview transcripts describing each interviewees' conceptions of teacher professional knowledge.

Pamela was the only interviewee who articulated a specific model for learning to teach:

coming into teaching where it's a craft and I'm really clumsy, really uncoordinated, being told that actually "you're not good at this at the moment" because at the start you're not very good and your timing goes rubbish. Learning something that's vocational and being rubbish at it now that it's OK to fail sometimes and its maintaining that and thinking you can't keep failing you've got to learn from the mistake.

She went on to say that she learnt to teach through "*practising it, day in, day out*" and through "*constant attempts at teaching*". Other interviewees also valued the opportunities they had to practise whilst undergoing their teacher preparation. Fiona said of learning to manage pupil behaviour "*the constant practice, becomes second nature*". Marie expressed a slightly different approach to practise when she said "*let's give that a shot with this class and see if it works*", "*you do have to make your own mistakes*" and "*you learnt by doing and it was... your own thoughts as to, well what can I do next time?*" However, without expert mentoring, Stu's assertion that "*I have to slowly improve myself rather than having somebody come in and suggest a strategy*" and Jack's that "*the kids...were guinea pigs*" easily become self-reinforcing or lead to limited growth in professional knowledge.

A common tool for learning to teach mentioned was observation, described by Pamela as "*really powerful*", Elaine as "*watching somebody and putting stuff into practice myself is really good as long as it is supported by some of the fundamentals*" and Harry identified that there were "*one or two teachers there that I observed and I learnt a hell of a lot from*". Those on employment-led routes who were largely autonomous in organising their learning made their own decisions as to who they chose to observe teaching. Stu was of the view that "*you've got to sort of find someone who is similar to you to learn from the most*" and Harry said:

I had to pick and choose who I observed - I know my teaching style, or should I say I learnt my teaching style and, so I knew that there was specific teachers I'd go and watch and I'd enjoy and learn a lot from and, there were other teachers that are just not my style and they're

more, if I observed them I'd feel like I'd wasted time, because I just wouldn't have managed the class or the situations that way.

It is interesting to reflect as to whether this is actually a function of relationship with the person they are observing, a need to learn some coping skills for the classroom really quickly so that someone who is very 'similar' means less adaptation to do, or whether they are seeking to avoid having what was sometimes fragile success disrupted by a challenging learning experience.

Several of the teachers suggested that they saw some aspects of professional practice as being difficult to learn or as natural in-born qualities: "*I've been quite lucky in the sense that my behaviour management's been pretty good from day one*" (Philip), "*I think being young helps that as well probably, and being a guy*" (Philip), "*Can you teach classroom presence? ... You can't teach it but you can learn some things*" (Fiona) and "*there are some skills that are very, very difficult to learn either in school or university*" (Sally).

Others were strongly of the view that "*you only really properly learn once you are in the situation doing it yourself*" (Claire) and:

it's one thing knowing the theory but it's another when you're in front of a class actually, sort of knowing how to respond there and then...you learn the most and you take the greatest step, leaps forward, by sort of rolling up your sleeves and just getting on with it ... , you can read all the books in the world but until you actually stand in front of a class and do it, you don't know - that's when you learn the most" (Marie).

Stu reinforced this:

nothing is going to compare to actually being there in the classroom dealing with the students and trying something and it going wrong ... and you slowly but surely working out what went wrong and trying something else, that sort of action research on the spot as it was going on...always ended up in me learning more quickly than I ever would ... reading in a book this is how you behaviour manage or somebody telling me this is how you behaviour manage"

Like Mark, Anna strongly identified herself as a teacher during her pre-service teaching and that she had 'learnt by taking the role' "*I didn't feel like I was doing any worse than anybody else who was actually working*" and "*I've*

Chapter 5: Analysis of interview data

actually been contributing and taking those classes". Several others suggested that an employment-led route was specifically suitable for them personally:

I think when you've been in the workplace for so long you don't want to go back and study, you're used to picking things up ...so sitting more passively, or reading a theory it becomes intensely frustrating after a while" (Marie).

I have to experience and do and then see either it work or not work and then think about it from there, rather than theoretically discussing....I just wanted to get really involved in the nitty gritty and that suited my skillset" (Jack).

I've always known I work better by throwing in at the deep end and 'just get on with it' and theory's great and it has its place and it underpins everything but for me, I need to see and do, rather than just sit and learn" (Kate).

Interviewees varied in the degree to which they were able to express themselves as having had a reflective approach to their learning. Pamela had a strong sense of having learnt from the experience of others and having been able to talk with others "*learning techniques and approaches from them, having a chance to question*" and had begun to see reflection as having a role in practise. Stu described his self-driven incremental learning path:

as I went along I'd do mini assessments of myself ...and I'd make those changes as I went along rather than having a deeper analysis andgoing through and sitting down and speaking about it with somebody else, I'd almost self-analyse and self-improve, I have to slowly improve myself rather than having somebody come in I think and suggest a strategy and kind of analyse it that way, I think it's more of a 'as you go' sort of, day by day, rather than these huge big changes".

Philip said of his experiences in school that he was told "*just do this*", which carries little sense of reasoned justification for action and implies passive transfer of information. He also justified his lack of creativity in his teaching by saying: "*I could do something fun here or I could do something that's going to get me at least, at worst, going to be 'good' "*.

Pamela's view was that teaching can be modelled and imitated, although she also recognised that the "*product might not replicate in the classroom*" and that people have different views given that her "*approach was seen as being quite weak or overly friendly*" by her mentor. Pamela was aware that imitation was insufficient:

if you are imitating something but don't know why you are doing it you're a bit kind of "ohhh", you need to know why you are doing it...I've got to dig these own roots.

Some of Philip's learning experiences were focused on developing procedures, such as routines for pupils to enter his classroom, and skills such as marking in a highly context-specific manner. He felt that when he followed his teacher preparation programme that there was "*very much a way of doing it... a way that you sort of taught that they wanted you to do*". He went on to say that he felt that this came from central government.

It is clear that the relationship between theory and practice of all kinds is complex and individual. The nature of teaching makes it more so because the practice elements are very observable and the theoretical elements less so.

5.2.3 The culture and relationships in the workplace

The employment-led teacher preparation route followed by participants in this study is available to those who already have three years' experience in the workplace, although this experience does not need to be in education. All those interviewed therefore, had some experience in the workplace and included some more mature career-changers.

Several of the teachers had successful previous careers in other fields and saw themselves as having had prior experiences that had been able to utilise to the benefit of their learning as a teacher. Mark suggested that age and maturity had given him beneficial personal skills: "*I think being a bit older gives you that resilience and you are less inclined to chuck the towel in*". Harry said that his Army experience had helped him to learn to deal with stress, in being able to "*wing it*" and in "*dealing with fatigue*". Marie suggested that the skills she had gained previous to her teacher preparation compensated for her lack of teaching experience:

Chapter 5: Analysis of interview data

I just wouldn't have had the life experience to make up for my lack of teaching experience....I had to draw on a lot of experiences from the workplace just in dealing with people and managing situations.... in explaining and presenting... If I hadn't have had that previous experience then it definitely wouldn't have been fair on the kids.

For Anna, her prior experiences meant she felt capable of a greater degree of independence than a young graduate: “*if you are retraining after another career ... you don't feel that you need as much hand holding as if you'd just come out of uni*”. Marie described how she drew on her previous experience in consultancy:

you set up your systems, you work out who are the key people you're going to need, um, you work out what theprocedures are, from that point of view it was just another consultancy project

and said “*a school's a school a school*”. Kate identified a range of skills that she felt that she had from her prior experience that were of benefit:

I've worked in lots of different places and I've always ... I trained adults in my last job so ... I think I have the ability, hopefully, to be able to explain something and then them go “huh” and I go “OK, let's start that again” and backtrack so I think my jobs have given me that. They've given me more patience but being a mum has done that as well... ..just knowing how to act in the workplace, ... being able to prioritise things and then sometimes, again being older I suppose being able to go “actually, you know what, it's not the end of the world if that doesn't get done”.

Harry, however, found the relationship between his previous experience as an Army Infantry Officer and becoming a teacher more complex. He saw teaching as offering some of the things he enjoyed in the Army, such as “*camaraderie*”. However, he found that others expected a great deal from him: “*you're an ex-Army officer....you'll deal with it*”. He also claimed that “*some teachers sloped shoulders for responsibility and that didn't sit very well with me because ... you've got to be professional*”. Jack had worked in schools for several years prior to starting his teacher preparation and this led to a similar expectation as that for Harry: “*I think there was almost kind of an expectation of 'he'll pick this up quite quickly' ”*. In Jack's case these “*exceptionally high expectations*”

were not helpful and he went through a particularly difficult period towards the end of his first term.

For most of the interviewees, feeling like they were a ‘real’ teacher whilst undertaking their teacher preparation had been very important to them and, for some, being an employee was a significant attraction of this preparation route. Philip said: *“there’s that legitimacy to it, you feel it’s a ‘proper’ lesson and I think when people are watching you they think ‘oh, yeah this is...’ ”*, Fiona said she *“felt like a teacher”* and Anna that it was *“just like being another member of staff – so own routines, own sanctions and rewards and just being a normal member of staff really”*. The value she held to being salaried was a repeating theme in Claire’s interview and she said, *“I felt like more of a valued member of staff”, “I liked feeling like I belonged somewhere”, “I felt like one of the team really”* and *“you don’t feel like a spare part”*. The sense of having a right to be there, of belonging, and being part of the staff team was clearly really important to her, culminating in the comment about one of her classes: *“the results they achieved was what I had put in”*. Marie expressed something similar: *“I was responsible, or it felt as if I was responsible for the classes”*. Stu said:

I think that was really nice, me being somewhere, effectively, for the whole year, you really felt like you could build up some relationships with your colleagues as opposed to perhaps being in lots of smaller placements where you don’t necessarily get to, to know a system”.

Kate expressed the same sentiment of *“having that constant ability to build the relationship”* and:

I was a member of staff, who got introduced on the first of September with every other normal new member of staff and I was treated in exactly the same way by being in a school all the time. The kids routinely saw your face, they knew you were going to be there every day, you weren’t going to pop in for a term and you were gone again...it wasn’t somebody else’s space that I was in, it was my space.

Whilst this sense of feeling like a teacher and being employed was clearly important to a number of the teachers interviewed, there were indications that some viewed themselves as junior to others in the school. Claire said *“the teacher would plan and then she’d tell me what to do”* and *“I’d do the routines that the teachers recommended becausethat’s what I sort of thought would*

Chapter 5: Analysis of interview data

be best". Kate said "*We were given time on our timetable*" and "*we were still allowed to have free time to go.....*".

One of the requirements of all teacher preparation programmes in England is that time must be spent in at least two different schools. Anna said of her second placement:

you were definitely not part of the maths team you know, the maths department, you were somebody who was there visiting for a few weeks.

This was in contrast to the strong feeling of 'doing the job of a teacher', mentioned earlier, that she experienced in her main placement school. Philip and Fiona also felt a similar sense of discomfort in their second placement schools. Philip had a strong sense of belonging in his main placement school, where he had worked for two years in support roles prior to his teacher preparation. He used the phrase "*ingrained transition*" several times in his interview to describe his move into teaching without changing location.

Both Philip and Fiona gained employment at their main placement school and felt very comfortable continuing in the same context, and Fiona said "*my only worry would be whether it would be like this somewhere else*". Stu's experience was even more localised in that both the schools he worked in during his training year were schools he attended as a pupil and he went on to gain a teaching post in one of them.

Whilst being viewed as an employee was seen as highly important by most of the interviewees, being on the payroll made the dynamic different from that of a pre-service teacher on a more traditional route. During their teacher preparation some had paid aspects to their employment such as supervising classes for absent colleagues and pastoral responsibilities. Several found that their teaching responsibilities changed during the year in response to school demands, for example, classes were changed as a result of staff absence or a maternity leave. In Marie's case she said that she thought "*they'd have been, probably been a little bit stuck, you know*" if she had not been there to fill the vacancy caused by the long-term sickness of someone in the department. Stu and Kate also experienced becoming at least partly non-supernumerary during their training year for similar reasons. All three were of the view that the school would have found it difficult to cope if they had not 'stepped-up'. They

seemed unaware that the school would otherwise have had to employ someone to cover the vacancy and that it was only the employed nature of their preparation route that allowed the school to perhaps save money by not doing so. It may also be that such changes have the effect of truncating the individual's teacher preparation.

An interesting possible consequence to this development of identity as an employee by those on employment-led teacher preparation routes was a sense, from some of them, that this route was somehow superior to the more traditional university-led route. Two of the teachers described there being a "divide" between the two cohorts and one said that "*there was a "they're just a PGCE" kind of attitude from some people*" [by PGCE meaning the university-led route]. A couple of the interviewees implied that they possibly saw the university-led route as inferior in some ways, "*I think I would have felt quite shell-shocked, if I'd come out of a PGCE without having been in a school for a set period of time*", says one. This teacher went on to say:

I definitely think that if you are retraining after another career that was a good way to go to get stuck into it quite quickly and just move through it quickly the salaried School Direct, definitely worked well at that sort of, that sort of experience, for that sort of person.

Harry suggested that if he had been on a non-salaried route he would have been "*on the periphery*" in school and that the university-led route was "*theoretically useful but practically you couldn't go 'well, OK I remember in my lesson when this happened, OK I should have done that, that makes sense'*".

Marie was of a similar view:

I couldn't have done a PGCE [meaning the university-led route], I think when you've been in the workplace for so long you don't want to go back and study, you're used to picking things up and you learn by doing, so sitting more passively, or reading a theory it becomes intensely frustrating after a while, especially if there's too much of it because you're there thinking "Well I want to be out doing".

However, the contrasts Marie drew between her experiences and what she envisaged was the experience of those on other routes do not ring true with my own experiences as a teacher educator. She, and some of the others interviewed, suggested that those on university-led routes took a lesser part in the life of the school and demonstrated, in my view, a degree of lack of

Chapter 5: Analysis of interview data

understanding of the expectations of other routes to teacher qualification. Whether those on other routes were of similar opinion is outside the scope of this study.

This sense of a 'difference' is also evident in comments from some of the teachers who felt that the employment-led route led to pre-service teachers being more prepared for their NQT year: "*it was a really nice transition between school direct and NQT... it didn't feel like a huge step up which was, which was nice.... I think for some of the PGCE it was all of a sudden a step up*" (Marie). Stu agreed:

when it came them going to their NQT year we weren't so worried about NQT year because feel like we've already been doing that but those that hadn't been when they got to the NQT year really looked suddenly quite swamped.

The teachers interviewed generally valued the support they received from others in their cohort of pre-service teachers and from groups of teachers in their placement schools. Several referred to this as 'camaraderie' and Stu said:

It was just a good chance for you to realise that everybody else was almost struggling as much as you, and that was quite a nice er sort of camaraderie you built up there I suppose...you realise that you are all going through it together ... there was a real sense of 'you're out there to support each other' and... pull each other through.

Harry also really valued this:

lots of times it was just... times when it was, I'd class it as miserable, um, which, yeah, so, but, but it was what I enjoyed because the whole camaraderie with my, with the peer group - the guys on the course - because everyone was as miserable as each other that you guys share with each other and you, you know, just banter and fun and that was good.

The sense of support and being part of a group came not just from other pre-service teachers but from the teachers they worked with as well so Jack described sharing cake at lunchtime with his department and Kate told how cake, doughnuts and coffee in the morning at school had helped her feel "*part of the team*".

The teachers interviewed saw themselves variously as learners (particularly in Claire's case), teachers (for example, Anna) but also as in a dual position.

Pamela described this:

I wanted very much to be seen by the students and by the staff as another member of staff there. I therefore felt that my professional duty of care and responsibility should match that... it wasn't me just wanting to do some extra study for my own enrichment this was very clearly the start of my career so I did keep on track and I was probably more wanting to ask for help to things get things right, or improve things, or meet the things I needed to meet, because it was a job I was doing, not simply self-enrichment, you know.

It seems, then, that employment-led teacher preparation has many layers of complexity and that much of this stems from the relationships between being a learner, and working as a teacher, and the culture of the school as a workplace. Whilst being employed whilst on their teacher preparation programme was something many of those interviewed valued, it was not unproblematic for any of them.

5.3 Conclusions

The analysis provides insights into the experiences and perceptions of a small number of secondary school teachers on an employment-led teacher preparation route. The data speaks of the complexity, variety and intensity of their experiences as well as to the essential nature of the mentoring relationship and the high level of skill needed by those mentoring those on employment-led routes. The data also identifies considerable challenges in relating aspects of theory to practice in terms of content knowledge and pedagogical content knowledge and in the understanding and experience of the nature of teaching and teacher learning. Centrally, it speaks to the importance of relationships and the culture of the school as a workplace.

Chapter 6: Further analysis and discussion

6.1 Introduction

The efficacy survey data analysis (chapter 4) identifies variation in outcomes for school-led teacher preparation through one perspective, and the teacher interview data (chapter 5) identifies both variation and complexity in the experiences of those who had previously participated in the programme through another. These are two key themes from the data analysis and identified in the literature discussed in section 2.9.2 (Association of Teachers and Lecturers 2014; Cochran-Smith et al. 2014; Geographical Association 2015; Grossman and Loeb 2010).

This chapter seeks to develop the data analysis, drawing on the literature from chapter 2, through what Savin-Baden and Major call 'data interpretation' and define as "the act of explication, explanation and elucidation" (2013, p.451) in order to uncover meaning. Patton describes this process in a number of ways including attaching significance to findings, "making sense...offering explanations,making inferences, considering meanings" (2002, p.480). Hence, the results of the early analysis described in section 3.9.5 and the thematic thick description in chapter 5, along with constant reference to the original data set, are interpreted through using the literature review.

6.2 Teacher preparation as apprenticeship

The lens used here to frame the discussion is that of apprenticeship. This draws on the literature in sections 1.5, 2.3 and 2.8 in particular, where apprenticeship and situated learning are identified as having importance for pre-service teacher learning. In order to analyse the data further through this lens, use is made of the modified version of the expansive/restrictive continuum incorporating the work of Hodkinson & Hodkinson (Evans et al. 2006) from Figure 10 (in section 2.8.5). Here, in Table 10, the labels for each aspect of this continuum are reproduced and discussed with reference to the interview data analysed in chapter 5. Each element of the continuum was then labelled to indicate the extent to which the data provided evidence for it to be

Chapter 6: Further analysis and discussion

considered an expansive or restrictive (see section 2.8.3) feature of apprenticeship.

Table 10 Comparison of interview data and continuum

Continuum label from Figure 10	Evidence from interview data (chapter 5)	Expansive/ Restrictive
Status	Sally, Elaine and Harry demonstrated an expectation that they were learners and would be treated as such in school. Others, such as Philip, Fiona, Anna and Claire, identified strongly as employees. In Claire and Fiona's cases this was despite being supernumerary.	Potentially restrictive
Collaboration	Interviewees described two aspects to this, one with regard to collaborating with colleagues in school and the other as 'camaraderie' with other pre-service teachers. Some, such as Paul, had fewer experiences of collaboration and others, such as Elaine and Sally, had periods when they described feeling quite isolated.	Varied
Participation	The design of this particular employment-led programme provided expansive participation, and all interviewees reported engaging with different groups within school, within a group of schools, and at university.	Expansive by design
'Participative memory'	This is not a theme developed to any degree in the interview data, but personal experience suggests that almost all schools have experience of some kind working with pre-service teachers.	Expansive in practice
Breadth	All the teachers made claims that their experience as pre-service teachers was broad and encompassed a range of experiences, although they tended to talk about this in terms of having had classes of differing ages and attainment. However, in practice this was narrow because it was almost entirely in one location, and highly situated.	Restrictive by design
Qualification	All those interviewed had been working towards a Post Graduate Certificate in Education with Master's credit and Qualified Teacher Status so this aspect is not applicable.	Expansive by design

Continuum label from Figure 10	Evidence from interview data (chapter 5)	Expansive/ Restrictive
Balance	The programme design required pre-service teachers to attend university one day a fortnight and, for most, another day a fortnight was spent working in a smaller group with those from a group of other schools. Whether this was sufficient for the experience to be considered 'balanced' is debatable.	Expansive, to a degree, and by design.
Transition	The pace of transition to full teaching responsibility varied considerably. Sally, for example, started teaching very early on, as did Harry. Jack, Philip, Mark and Anna also had non-supernumerary aspects to their employment from the start. Fiona, Claire and Pamela were supernumerary all year. Marie, Stu and Kate took on non-supernumerary aspects to their employment part way through the year.	Varied
Aim	All had being a competent classroom practitioner as their aim. Some teachers expressed a strong sense of being on a learning journey, for example, Marie said " <i>I still feel as though I've got loads to learn</i> " and Stu " <i>if you don't want to improve you're just going to stagnate</i> ".	Varied
Career future	Mark had already been promoted, and Marie, Fiona and Philip all had aspirations to move into leadership of some kind in school.	Varied
Structural need	Most of the teachers had been non-supernumerary for at least part of their teacher preparation. In some cases, they had been filling a vacancy created by staff absence part way through the academic year. Most went on to teach in their placement school or in the school where they did their short second placement, although Elaine claimed she was 'promised' a job by her main placement but then the school backed down from this.	Restrictive

Continuum label from Figure 10	Evidence from interview data (chapter 5)	Expansive/ Restrictive
Identity	All interviewees had undertaken a degree of boundary-crossing during their teacher preparation from their previous workplace into school and most crossed into identifying themselves strongly as teachers early on in their teacher preparation. However, Stu and Harry also chose to limit the extent to which they crossed boundaries and developed their teacher identity further by only observing other teachers they considered similar to themselves.	Varied, potentially restrictive
Access	All the teachers made claims for good access to the profession at all levels. However, in practice this was narrow because it is almost entirely in one location, and highly situated.	Restrictive by design

In summary, Table 10 suggests that this employment-led programme has both highly restrictive and highly expansive features as well as a number of other features where there may be variation. Whilst some features are fixed at one end or other of the continuum providing fixed points of reference, other features are enacted differently in different circumstances. Thus the survey analysis (Chapter 4) and the interview data analysis mutually support findings of variation in the experience of pre-service secondary teachers on employment-led programmes. Further, the interview data analysis indicates that the situated nature of the programme is a key factor here. Table 11 summarises these findings as to the aspects of the expansive/restrictive continuum that were fixed and those where there was some variation.

Table 11 Typography summarising nature of aspects in employment-led teacher preparation

Fixed as restrictive	Fixed as expansive	Varied
Status (potentially)	Participation	Collaboration
Breadth	Participative memory	Transition to teaching
Structural need	Qualification	Aims of programme
Access	Balance	Career future
		Identity

To take a deeper look at the data through this apprenticeship lens, each of the five aspects labelled as ‘varied’ are considered in turn. Some further coding of the data in chapter 5 was undertaken at this point against the key features of apprenticeship.

6.2.1 Collaboration

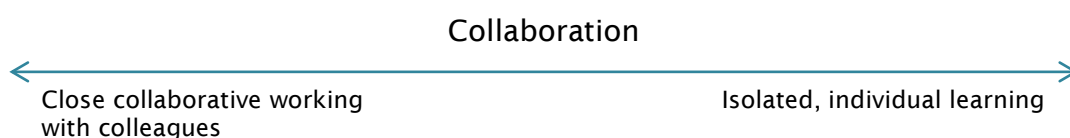


Figure 13 Collaboration continuum

Section 2.3.1 identifies the centrality of collaborating with others in situated learning particularly through communities of practice and the value of support from other pre-service teachers is a finding in Griffiths’ (2007) research. The continuum for ‘collaboration’ (shown in Figure 13) identifies the need for pre-service teachers to have opportunities to collaborate with others for expansive apprenticeship. The teachers interviewed identified that they had opportunities to collaborate with other pre-service teachers and with other, more experienced, teachers whilst undergoing teacher preparation (see section 5.2.3). However, there was some variation in the extent to which opportunities to collaborate as one of the teachers interviewed, Paul, described having fewer opportunities to work in this way than others did and Sally and Elaine described feeling isolated at times during their teacher preparation.

6.2.2 Transition to teaching

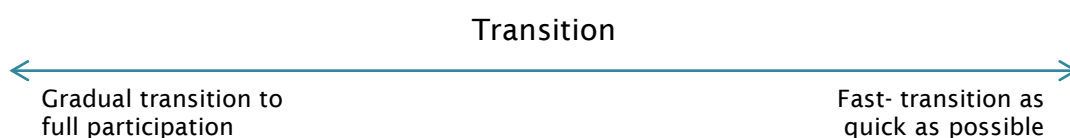


Figure 14 Transition continuum

One of the key features in Lave & Wenger’s (1991) is that of legitimate peripheral practice (see section 2.3) and some of the challenges implementing this in teacher preparation are discussed in sections 2.3.2 and 2.8.2. Unsurprisingly, starting to teach lessons is an important milestone for beginning teachers and this transition can be gradual or rapid (see Figure 14),

Chapter 6: Further analysis and discussion

with the interview data (see section 5.2.1) finding a variety of experience in this regard. A key distinctive of employment-led routes is the opportunity they provide for the pre-service teacher to be independently responsible for classes. Because the pre-service teacher is an employee of the school they can legally be responsible for a class in their own right, without a supervising teacher being present. As a consequence, it is possible for them to take a class independently from the beginning of the school year, and this was the experience of some of the teachers interviewed. Other interviewees were supernumerary, at least at the beginning, and therefore able to experience a more gradual transition to taking responsibility for a class (see pen portraits in Appendix 8). Where transition was gradual, the pre-service teacher worked with a supervising teacher during this period and beyond, with consequent support and feedback. This provided what Eraut (2004) calls an ‘ideal work situation’ where the apprentice is able to consolidate previously acquired competences whilst extending learning through coaching and peripheral participation. However, those pre-service teachers who were non-supernumerary from the beginning of their programme found that this type of specific, focused in-class support was much more limited; a difficulty identified by Philpott who comments that rapid transition may leave “insufficient space for learning” (2014, p.43). In schools where the pre-service teacher was viewed as already possessing considerable classroom experience, the transformation to being the class teacher was reported as rapid. Rapid transition to independent teaching was also a function, as reported by the teachers in section 5.2.3, of their perceived ability on the part of the school, or the teacher’s own sense of competence.

The process of teacher preparation is one where novices transform into teachers over time. Eraut (2004) identifies that prior to transforming knowledge to apply to a new situation, the learner needs to extract potentially relevant information from previous contexts, understand the new situation and recognise what is relevant. This process is evident in comments such as that from Marie in section 6.2.3 where she describes seeing teacher preparation as “*just another consultancy project*” drawing on her previous workplace skills. Feiman-Nemser describes this ‘extracting’ as involving “transforming different kinds of knowledge into a flexible, evolving set of commitments,

understandings, and skills” (2001, p.1048). Transforming into a teacher is therefore considered as a developmental process in this study.

6.2.3 Aims of programme

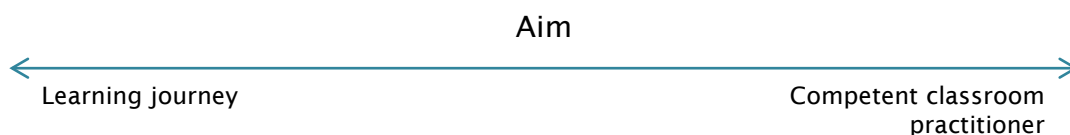


Figure 15 Aim continuum

Evans (2010) identifies fundamentally different aims for university-led and school-led teacher preparation programmes. The employment-led route under investigation in this study could be characterised as seeking to prepare someone who completes the programme as ‘classroom ready’ for a specific context as contrasting with university-led routes aiming to prepare someone who will be in a position to grow and develop further to teach in a range of contexts. This divergence in principal aims is identified by the teacher educator interviewed:

if they have significantly more experience than perhaps say a typical HE-led PGCE route they will often start their NQT year more confident, more fluent in the classroom. They’ve built up those routines of all sorts that we know experienced teachers think in terms of, so their knowledge and skills in the classroom are often less fragmented than those coming from an HE-led PGCE.

Hence, the degree to which teacher preparation is seen as developmental is in conflict with the extent to which it is seen as ‘doing the job’, reflecting some of the discussion in section 2.8.2 on the limitations of apprenticeship. In Figure 15, different aims are identified for expansive and restrictive programmes. Revisiting Fuller & Unwin’s (2004) original continuum, the aim of an apprenticeship is full participation but in the expansive variant this is as a ‘rounded expert’ and in the restrictive as a ‘partial expert’. Hence ‘competent classroom practitioner’ is used here as the expression of ‘partial expert’ (i.e. restrictive practice) and ‘learning journey’ to express a sense of there being more learning to undertake to become the ‘rounded expert’ (i.e. expansive practice). Interviewees all had at least the restrictive goal of competent classroom practitioner. This is not necessarily restrictive but becomes so if

Chapter 6: Further analysis and discussion

there is little sense of continuing to learn. Some were more clearly expansive in their view, having expressed that they expected that their learning would continue following initial teacher qualification.

6.2.4 Career future

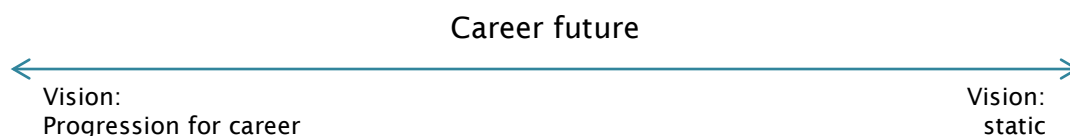


Figure 16 Career future continuum

The continuum in Figure 16 is probably of less significance given the structure of the teaching profession and the nature of teacher shortages. Several of those interviewed expressed ambitions to be promoted, and some were content with remaining as a subject teacher, at least in the medium term. The restrictive notion of a ‘static vision’ is not necessarily wrong in its own right given that expert classroom practitioners are highly valued in schools. However, coupled with not seeing teaching as an ongoing learning journey this would become restrictive practice.

6.2.5 Identity

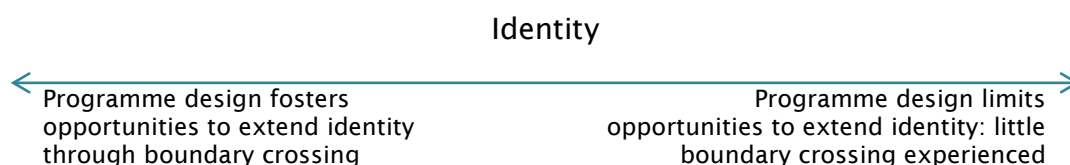


Figure 17 Identity continuum

The final continuum for section 6.2 is shown in Figure 17. That this section is considerably longer than the previous four is an indication of the extent to which aspects of developing identity as a teacher featured in the data. Identity is of importance both in apprenticeship and in the development of pre-service teachers and the literature discussed in section 2.4 introduces the reoccurring theme. Notable in the interview analysis (section 5.2.3) is the extent to which a number of the teachers placed a high value on attributes related to their identity as a teacher, in particular in relation to professional and situated identity, when undertaking their teacher preparation.

One of the four components of a social theory of learning is ‘identity’ (Wenger, 1998, in section 2.3.1). Developing identity is also key to teacher development, and is complex, changing and multi-faceted (section 2.4). ‘Identity’ as a teacher in the school was highly valued by all the interviewees who gained a considerable sense of security from it.

The situated nature of the programme provided opportunities for some to design a potentially restrictive experience for themselves towards developing teacher identity by allowing them avoid challenge in designing their own learning experiences (section 5.2.2). The continuum in Figure 17 distinguishes experience based on the opportunities offered to extend identity through boundary crossing. The potential learning mechanisms from Akkerman and Bakker (2011) identified in section 2.4 are presented here alongside evidence from the interviews in Table 12.

Table 12 Comparison of interviews and boundary learning mechanisms
(Akkerman and Bakker 2011)

Learning mechanism (Akkerman and Bakker 2011)	Connection to interviews
<p>Identification</p> <p>Here, boundaries are reconstructed but not overcome, and the process is of “sense making of different practices and related identities” (p.143).</p>	<p>This type of learning mechanism for boundary crossing is seen in the accounts of those interviewees who had short second placements who were unable to engage in any more than sense making and working out the differences:</p> <p><i>The whole experience felt different.... I felt almost like going backwards.... I remember thinking ‘I don’t want to leave [main placement], I’m just going to stay here and see if I don’t have to do a second placement’ (Kate)</i></p> <p><i>I didn’t feel that samesort of ...the same ...togetherness and the same kind of ...I felt a lot more like a trainee, I felt a lot less experienced,... and I found myself making, really, the kind of mistakes that I’d never, doing the things you’d never do for your own classes...finding yourself picking up on like behaviour that is so low level and taking it way out of....taking it all.... (Philip)</i></p>

Learning mechanism (Akkerman and Bakker 2011)	Connection to interviews
<p>Coordination</p> <p>In this mechanism, the boundary is overcome with “effortless movement between different sites” (p.144)</p>	<p>Illustrating this mechanism, some teachers felt that they had shifted effectively across the boundary from their previous workplace to teaching:</p> <p><i>when you’ve spent twenty years in the workplace a school’s a school a school...I tended to approach it like any consultancy project (Marie)</i></p> <p>Fiona had a series of intermediate shifts in that, following a few years in another career, she worked as a learning support assistant in the school prior to starting her teacher preparation, which again supported a gradual transition where she started off observing classes before taking up the teaching gradually. When her status in the school was challenged by a parent the school supported her in reinforcing her position as a teacher on the staff team.</p>
<p>Reflection</p> <p>realising and explicating “differences between practices and thus to learn something new about their own and others’ practices” (pp.144-145)</p>	<p>In some cases, the interviewees felt either that they had insufficient time for reflection or the reflection they undertook was of limited quality (see section 6.4).</p> <p>As noted in section 5.2.2, Harry and Stu chose to observe those that they felt were ‘similar to themselves’, which would limit their opportunities to learn through exploring difference.</p>
<p>Transformation</p> <p>“leads to profound changes in practices” (p.146) through “confrontation”, “recognising a shared problem space,” “hybridisation” and “crystallisation” (pp.146-148).</p>	<p>This mechanism has several stages and is complex, so it is perhaps one that would take some time to accomplish its goal of profoundly changing practice.</p> <p>For example, Harry’s confrontation with the differences between his previous career experience as an Army Infantry Officer and beginning as a teacher is described in section 5.2.1. However, he failed to manage the boundary crossing process and did not take up employment as a teacher at the end of his teacher preparation.</p>

In summary, this analysis identifies the limited nature of some the boundary crossing undertaken by the teachers during their teacher preparation. There is evidence in the transcripts of boundary crossing for the development of identity through the mechanisms of identification (in their second placement)

and coordination. There is more limited evidence of the mechanisms of reflection and transformation. Section 2.4 cites literature from Edwards (2010) and Day et al. (2006) indicating that teacher identity is not fixed and therefore developing an identity as a teacher is considered as a developmental process in this study.

6.3 Content knowledge and pedagogical content knowledge

This study specifically focuses on preparation for subject-specific secondary school teaching. Sections 2.2.1 and 2.2.7 find that both content knowledge and pedagogical content knowledge are important aspects of teacher knowledge. The development of these are not specific features of either Fuller and Unwin's (2008) expansive/restrictive continuum for apprenticeship or Hodkinson and Hodkinson's (2006) adaption for experienced teachers' learning in the workplace. However, section 5.2.2 identifies them as being of importance to those interviewed. For Sally, who lacked content knowledge in her subject, it was difficult to develop this in the situated learning environment. For Harry and Paul, both computer science teachers, content knowledge was a difficulty, but it was also a difficulty for the experienced teachers in their departments because of national syllabus changes. The science and humanities teachers interviewed also had a need to develop personal content knowledge outside their main specialism but they accepted this as a necessary part of teaching their subject knowledge. All the teachers spoke about both types of content knowledge in their interviews and all recognised that they had developed at least some aspects of pedagogical content knowledge whilst undertaking their teacher preparation.

In a view supported by Feiman-Nemser (2001), Grossman (1990) considers disciplinary knowledge to be 'crucial'; something that some of the interviewees under-estimated prior to starting their teacher preparation (see section 5.2.2). Chambers et al. (2010) find subject knowledge to be of sufficient importance that its lack can contribute to failure to successfully complete teacher preparation. Van Driel et al. find that "the development of PCK [pedagogical content knowledge] depends to a large extent on preservice teachers' subject

matter knowledge” (2002, p.587), which explains some of the difficulties identified by interviewees in section 5.2.2.

6.4 Reflective practice

Reflection is referenced in chapter 2 both as a feature of expansive apprenticeship (section 2.8) and as a feature of teacher preparation (section 2.2). Evidence as to the quality of the reflection undertaken by those interviewed whilst undergoing teacher preparation can be found in section 5.2.2. There was little evidence from the transcripts of the kind of deeper, more insightful reflection that transforms practice. What was described had the characteristics of surface level, teacher-focused, ‘fixing a problem’ type reflection. The teacher educator interviewed in the pilot identified this as a particular issue with non-supernumerary pre-service teachers who potentially lack support for “*reflecting about what happens in the middle of teaching*”. This lack, and that of opportunities to reflect “*with a more experienced [teacher] of what that teacher has been doing on a frequent and small scale basis*”, are functions of operating alone in a classroom and with limited opportunities to work with and observe other teachers.

Paul, one of the teachers interviewed, indicated that, now having taught for some time, he has gained an awareness of the value of pedagogical reflection. Of his teacher preparation he said he “*no time to talk about any research,.....no time for.... reflection, particularly subject specific....the idea of how to teach it*”. Another interviewee, Philip, also said that, looking back, one of the things he did not do very well when he was a pre-service teacher was reflecting on the learning of pupils. There was also evidence of some teachers viewing reflection during their teacher preparation programme as a requirement ‘to be done’ as in Pamela’s assertion that she would “*put the reflection to on side because I’ve got to get ready to plan*” and Sally’s that it was what she ‘did on a Wednesday’.

In critiquing situated learning, Hammersley suggests that:

What is downplayed in significance is not just direct teaching but also those forms of reflection which seek to represent the practice, or aspects of it, in terms of propositional accounts (2005, p.14).

Whilst the expansive/restrictive continuum framework contains reference to the provision of opportunities for reflection as expansive practice, examination of the interview transcripts supports Hammersley's view that this is under-developed in situated learning in practice.

6.5 Belonging

Related to, but distinct from, identity is the notion used in this study called 'belonging'. A sense of belonging, having 'a right to be there' and the opportunity to function as and feel that they were being treated as 'real teachers' seemed to have been of importance. Patrick's (2013) study has similar findings and they are also reflected in the comment from H. Hodkinson and P. Hodkinson that "we need to belong to learn" (2004, p.29). A number of those interviewed articulated that they had felt that they 'belonged' in their main placement school and that they felt some degree of permanency in that environment.

Huberman (1989) discusses what he calls 'phases' in the life cycle of a teacher and from the interview analysis some of those on employment-led teacher preparation programmes, such as Anna, focused on 'survival' part of the 'survival and discovery' first phase and then rapidly moved on to 'stabilisation' in that they felt well-prepared for their NQT year (section 5.2.3). Two of the teachers interviewed, Stu and Harry, described how they sought to observe those who they felt were similar to themselves hence focusing on the survival aspect of the first phase but also raising a concern about limited identity formation (Olsen 2008) where 'reciprocal reinforcement' hinders development. Huberman suggests that the stabilisation phase comes when "one has worked up a rudimentary instructional repertoire that fits most situations encountered in the first to four years of teaching" (1989, p.34). Hence, the sheer quantity of time those on this employment-led route spent teaching either meant they got to this stage very quickly, or that they skipped much of the first stage, possibly to their detriment. The argument that there was an absence of early 'discovery' work also suggests that some of those completing teacher preparation through this route with very considerable time spent in the classroom potentially may not move into the 'experimentation/activism' later in their careers having under-engaged with these earlier learning experiences. They may, further, have less opportunity for what Waring and Evans (2015) call 'critical professional

Chapter 6: Further analysis and discussion

identity development'. However, exploring later career development of those who followed employment-led routes is outside the scope of this study.

The interview data analysed in section 5.2.3 suggests that employing the pre-service teacher as a member of the teaching staff of a school functioned as a contributing factor to their sense of belonging. However, this did not guarantee either success in completing teacher preparation (although I was unable to gain agreement from anyone who had withdrawn from the programme for an interview) or 'smooth sailing' through the programme. Most described a sense of validation or worth from their status as employees of a school. This sense of belonging was true even for those who were supernumerary all year. Some teachers spoke about the length of time they spent in school, their familiarity with the specific school, and the relationships they had built with staff and pupils, all of which contributed to developing a sense of belonging. Some also viewed the programme as increasing their employability and readiness to teach, further contributing to a sense of identity as a teacher. In several cases they gained employment in the school they were placed in, often early on in their preparation programme, so they had a heightened sense of belonging there.

6.6 Learning to teach

This study is underpinned by the first section in the literature review regarding teacher knowledge and learning. The transcripts provide insight into the teachers' views on the nature of learning to teach regarding understanding what it is teachers do, the knowledge base needed for teaching (about which (Hargreaves) says there is no agreement) and how it is learnt. Transcripts were coded specifically to identify and analyse the teachers' views on teacher knowledge and learning (section 5.2.2).

The interviewees focused largely on one of Pring's (2011) views of the teacher, where the teacher is seen as deliverer (section 2.2.2). In brief, some teachers described their preparation largely in terms of Winch et al.'s (2013) 'teacher as craft worker' typology (see section 2.2.3). Evidence of the 'teacher as executive technician' model (section 2.2.4) is less overt, but was implicit when Philip said that there was "*very much a way of doing it... a way that you sort of taught that they wanted you to do*". Others talked about "*techniques*" and "*tips*" and

the technician approach is probably embedded within these, but not brought out by the questions in the interview schedule. All mentioned 'reflection' at some point in their interview but, as discussed in section 6.4, not in the nuanced sense of critical development and fundamental challenge of practice (see section 2.2.5), but as evaluating and improving functional elements of practice.

The value many of the interviewees put on practise echoes Winch's assertion that successful teaching "depends heavily on skill" (2012, p.5) (see section 2.2.2) and Valencia et al. describe the "power of student teaching" as "legend" (2009, p.305). It is striking that the models of professional learning discussed in section 2.2.2 all have procedural type aspects to them, but only ever as one aspect of a multifaceted model. The value of practise is not in dispute; it is the degree to which it is part of the whole and the nature of the practise that is of importance. Repetition has some value, but structured experience with evaluative and reflective elements in order to develop learning would offer the potential for better progress and development. Section 5.2.1 identifies that some teachers saw the process of learning to teach is either as one of 'having a go' or as 'seeing what works' and Feiman-Nemser (2001) suggests that beginning teachers do not start by feeling unprepared because they think they know more than they actually do.

The interview analysis in section 5.2.2 finds a preference by the teachers for practice over theory, supporting the findings of both Allen (2009) and Evans (2010) discussed in section 2.6.2. Section 2.3.1 notes Billett (1994) and Gheradi et al. (1998) as identifying observing and listening as activity and as important in situated learning. The 'observable' nature of classroom practice means that many of the teachers valued the opportunities they had during their teacher preparation to observe the teaching of others and but theory is difficult to observe and often, in my experience, requires the support of a skilled teacher educator in order to draw out its relevance and utility. Section 1.5 cites four different circumstances as to the awareness learners have of the knowledge embedded in their practice (Eraut 2009). For some of the teachers, their early practice was of Eraut's first kind, 'modelled on that of others without understanding'. This practice was influenced by their prior experiences through apprenticeship of observation (see section 2.8.2). However, most showed evidence of moving onto a degree of reflection on their practice,

Chapter 6: Further analysis and discussion

although the step of responding to challenges in practice critically is demanding for pre-service teachers, particularly if they are non-supernumerary. Section 5.2.3 identifies that, for some, being an employee and therefore receiving a salary whilst completing their teaching preparation was particularly important. In part this seemed to be because it legitimised their contribution in the school. As Illeris (2011) points out, though, learning and work are not always compatible in that work will always take precedence, and also that, sometimes, learning creates disturbance in the workplace. None of the interviewees specifically articulated any such dilemmas although it is clear in section 5.2.3 that most felt their school placement took precedence over university requirements and that some sought to avoid, or explain away, any such disturbances.

Funding for teacher preparation in England is complex, with the amount of the bursary available for those on 'training' routes dependant on class of degree and on the subject being taught. At the time they undertook their teacher preparation, for some interviewees, the salaried route was much more financially attractive, especially as they had not been required to pay the fees that those on other routes had. Mark said "*I think if I hadn't been offered this position here I wouldn't have taken that route*" (meaning a training route) and "*that's not a route that I would have taken because I wouldn't have wanted to a) paid for the qualification and b) to go a year without a salary*". Not wanting to pay fees may suggest that Mark may not have wanted to be viewed as a learner. He was the only one who was as explicit as this, but it may have been a view held by others. Fiona said "*The big benefit for me was being paid, I don't think I'd have done it otherwise*", echoed by Kate's "*I needed a pay cheque*" and Claire saying, "*the salaried option is a lot more securepeople still need to live ... I knew that I would still be able to achieve the end goal*".

For me as a teacher educator, there are some worrying implications from what teachers said in their interviews about the nature of teaching. There is the suggestion that teaching is not a complex undertaking, that there is little that needs to be learnt because good teaching is about having the 'right' personal attributes (section 5.2.2) and that theory offers little to the process and practice of beginning teaching (section 5.2.2). The interview analysis identifies that a number of the teachers had taken on non-supernumerary aspects to their role part-way through their teacher preparation year in response to staff

sickness or absence. Most saw this as a responsibility of their employment and validation of their success thus far: *"I felt so much part of the team, I just thought 'do you know what, yeah, go on, why not?'"* (Kate), *"I was needed"* (Stu) and *"I think they'd have been, probably been a little bit stuck"* (Marie). Several others were solely or partly non-supernumerary for the whole year. The extent to which this impacted on their teacher preparation by truncating it or by limiting opportunities is not clear, but is worthy of some consideration.

Realistic practice experience is important because, as Dewey (1971, n.p.) identifies, if conditions for practice are insufficiently real then practice can be like "learning to swim without going too near the water" and will not be successful. Whilst Dewey argues for this 'liberty' and whilst the teachers in this study were content to experiment on classes of pupils, such practice experience is neither collaborative nor does it sit comfortably in the current performativity and accountability culture in schools. It also begs the question as to how, and on what basis, individual pre-service teachers judge their own performance in the classroom. One might also suggest that there is some kind of contradiction at work where the same government that expanded school-led teacher preparation (and so allowing unqualified teachers to practice unsupervised) also requires high levels of accountability from schools.

Cohen finds benefits in imitation in that it allows the apprentice to 'see' themselves in the role and also, through making mistakes, to explore some of the "normative limits and conditions which govern the surface structure of a practice" (1995, p.143). However, imitation does not develop alternative practices; it can only reproduce existing ones and Hordern (2014) cautions that imitative practice can lead to the devaluing of professional judgement and a lack of consideration of alternative practices (Beyer 1988; Anderson and Stillman 2013). Nor does imitation necessarily involve understanding. For example, in the case of a beginning teacher imitating an expert teacher there is no insight into the pedagogical decision-making underpinning the observed (and copied) practice unless the expert teacher exposes their thinking to the novice. As Feiman-Nemser (2001) asserts, school placement experience also needs to include guided practice, knowledge application and enquiry, in addition to observation and apprenticeship. In their survey of American alternative certification programmes, Humphrey and Wechsler (2007) identify

Chapter 6: Further analysis and discussion

both the quality of mentoring and the intensity of support in school as variables affecting the success of those following these types of programmes.

The interviews (see sections 5.2.1 and 5.2.2) speak to the value pre-service teachers put on observing the teaching of others. Part of observing the practice of others is to align one's own practice with what one perceives as the norms and expectations of others as demonstrated in their own practice. Section 5.2.2 identifies that part of the purpose of observing others may also be for the purposes of imitating them, and also that some of the teachers had sought to observe those that they felt were 'similar' to themselves, because making direct connections with their own practice was easier in these cases. Such learning is of the lower levels of awareness of the knowledge embedded in practice (Eraut 2009) discussed in section 1.5 and Anderson et al. (2005) may not result in pre-service teachers developing an understanding of the detail of what they have observed.

Several teachers (see sections 5.2.1 and 5.2.2) described valuing the opportunities they had to experiment, to try things out, practise, without a supervising teacher present. Over a century ago Dewey (1971, n.p.) identified the importance of such experience:

Practice-teachers should be given the maximum amount of liberty possible. They should not be too closely supervised, nor too minutely and immediately criticised on the matter or the method of their teaching.

However, the outcome may be 'unguided experimentation', described by one interviewee as him treating his pupils as if they were "*guinea pigs*" in an experiment.

6.7 Relationships in the workplace

Section 5.2 introduces the interview analysis by considering the importance of three areas of interest all of which are about relationships. Whilst some may consider teaching to have solitary aspects to its practice (see, for example, Lortie 2002 and Evans et al. 2006), the interview analysis identifies the central and complex nature of relationships in the workplace for pre-service teachers, which is also true of all workplaces (Eraut 2004). Kate's comment that "*if things had gone really wrong... you can't go to your mentor because the*

chances are it is with that person anyway” speaks to the importance for pre-service teachers of the relationship with their mentor. Mentor relationships are characterised in section 5.2.1 as being variable but also complex, and tied in with the pre-service teacher’s dual status on this type of preparation route. This dual status is one of the underpinning themes in this study and can be found in the literature about apprenticeship discussed in section 2.7 and the discussion in sections 6.5 and 6.6. Pre-service teachers on an employment-led route are both learning and teaching so the school is both their workplace and the site of their learning and this leads to considerable complexity, as found in section 2.6.3 (Allen and Peach 2007; Smith and Hodson 2010).

All of those interviewed were aware of their ‘junior’ or ‘new’ status and, for those such as Anna, Mark and Marie, who had previously had successful careers in other fields this complicated their relationships in the workplace (Tigchelaar et al. 2008). For Jack and Harry there was a further tension because they both felt that their schools had unrealistic expectations of them. These findings echo those of Griffiths’ (2007) study of those following an employment-based route to primary school teaching.

Section 5.2.1 considers the key relationship in the workplace as being between mentor and pre-service teacher, which is also the subject of section 2.7 in the literature review. Section 2.3 identifies the novice-expert relationship as at the heart of situated learning. However, this model may also over-simplify the relationship between mentor and pre-service teacher and the European Commission suggest that “career paths in teaching are no longer one-dimensional, going from a novice to an expert” (2015, p.32). The novice may have the content knowledge expertise (in the case of Harry), considerable classroom experience (in the cases of Jack and Philip), or other skills valued by schools. As Smith and Avetisian say, “Expert-novice models are linear and presume scaffolding in the direction of the expert’s practice” (2011, p.344). Some pre-service teachers had mentors who were not master teachers, as Harry and Elaine both claimed not to, so some pre-service teachers may have had limited access to expertise. Gheradi et al. further suggest that aspects of the social relationship between master and novice such as style and arrangements determine “which events and situations will count as learning opportunities” (1998, p.23) and impact on the ability to work productively together (Feiman-Nemser 2001). Using McIntyre and Hagger’s (1993) models

Chapter 6: Further analysis and discussion

of mentoring, discussed in section 2.7, the pre-service teachers in this study mostly experienced either a 'minimal' model providing limited support in planning and implementing lessons or the more 'developed' model with some additional sharing and support.

Evans et al. caution us to beware of "how mechanisms of power and hierarchy, selection, and exclusion" (2006, p.15) operate and the analysis in sections 5.2.1 and 5.2.3 indicates that such mechanisms were at work. The interviews indicate that the teachers were very loyal to their employing school and, as Brown et al. (2014) found, identified strongly with the teacher preparation route undertaken. However, this loyalty may sometimes have been misplaced, for example Philip said of his employment-led teacher preparation route, "*it prepares you brilliantly*" but then went on to criticise his programme: "*I think it would have been good to a bit of team teaching.....there was a general assumption that I was Ok a lot of the time*". Several of the teachers said that they had taught classes spanning the age and attainment range, but then went on to say that they only taught low attainers or gained no experience in teaching older pupils. Issues of hierarchy and selection are also identifiable when Stu said that "*those doing the route had been chosen because they were able*" and Anna referred to those on another teacher preparation route as "*the golden children....it was all very hierarchical and almost political*". In section 5.2.1 several of the teachers described being very aware of judgements being passed when their practice was being observed. Many strongly valued their identity as teachers in school (section 5.2.3) and some felt that their placement school had high expectations of them. They may therefore have found themselves needing, or feeling that they needed, to demonstrate that they were fully developed as teachers before completing their preparation programme (see section 2.6.2). The need to demonstrate that they were fully developed as teachers before completing their preparation programme is one of a number of tensions identified in the literature by Pillen et al. (2013). However, such skill can only be gained "by beginning to do what they do not yet understand" (Feiman-Nemser 2001, p.1027) and this provides contradiction and an element of potential competing of goals in teacher preparation between 'learning' and 'doing the job'. Patrick also finds pre-service teachers feeling that "whilst they are not yet teachers, they are expected to perform as teachers" (2013, p.210) and her small study of Australian pre-service teachers

and mentors also finds a striking difference in the perceptions of professional experience and a strong sense of lack of balance of power between the two groups.

Hence, there is a great deal of evidence as to the complexity of relationships in the workplace and that this is made more so by the dual role of those on employment-led routes where many are both teacher and learner.

6.8 The value of situatedness

In a situated learning model, learning is seen as the process of developing identity. In this sense, teacher preparation is seen as learning to be a teacher by carrying out the role in school in order to develop that identity. A distinct feature of employment-led teacher preparation, by its very nature, is that it is workplace learning (section 2.8). In her study of an employment-led route, Griffiths describes the strength of the employment-led programme she researched as being the “immersion in the culture and organisation of the school” (2007, p.120), but also suggests that this was also its greatest limitation because of the narrow focus on one teaching environment.

The interview analysis in section 5.2.3 identifies that teachers saw strong positive benefits to the situated nature of their teacher preparation. In part, this is related to the strong sense of belonging, value and identity they gained through this aspect of the programme (see sections 6.2.5 and 6.5) but also, as Stu put it, “*nothing is going to compare with actually being there in the classroom dealing with the students*”.

However, there are disadvantages with this level of situatedness and Stu said “*you get so encaptured in your own bubble*”. Marie completely independently used the same word, ‘bubble’, to express her concern that, without the university input, her experience would have felt very parochial. Pre-service teachers may become somewhat ‘institutionalised’ through a highly situated preparation programme, particularly if they follow a programme based in the school at which they were previously employed, where they had attended as a pupil, have limited opportunity to experience other contexts, or go on to gain employment as a teacher in the same school. Hager’s (2011) claim is that the nature of what is learnt depends significantly on the context in which it is learnt.

Chapter 6: Further analysis and discussion

As identified in section 1.5, Eraut (2004, pp.266-7) identifies four different types of work activity leading to learning. A situated approach to teacher preparation provides all of these, but with a greater emphasis on the third ('tackling challenging tasks) and fourth ('working with clients' with the 'clients' being pupils). Difficulties relate as to how the first ('participation in group activities') and second ('working alongside others') can be made meaningful for those following an employment-led teacher preparation route and in making the challenges manageable rather than overwhelming.

Those interviewed had a strong sense that they were participating in the life of the school. One of the teacher interviewees, Pamela, demonstrated this (see section 5.2.3) when she said that she felt that her "*professional duty of care and responsibility should match that*" of a fully qualified teacher. Another, Anna, identified a distinction in how she felt in her two placement school when she decided herself as a '*visitor*', rather than a full participant, in the second one. In section 5.2.3, four teachers, Philip, Anna, Claire and Kate, said that they learnt how to behave in a 'teacher-like' manner in school.

6.9 The importance of individual biography

Learning, by definition, is a very individual undertaking, and it is clear from the discussion so far that identity, belonging and relationships are central (as noted in section 2.2.6). There is also some recognition in the literature reviewed in sections 2.6.2 and 2.9.2 of the impact of prior experiences and beliefs on teacher learning.

When teacher preparation is heavily situated there is less opportunity for other learning environments and experiences to provide a 'counter' so when there are tensions and difficulties the situations are more complex and may be more difficult to resolve (see section 5.2.1). In the employment-led route followed in this study, participants had to have three years of work experience and several were older career-changers with families. Each has a story to tell, and the transcripts and data analysis, as well as the pen portraits in Appendix 8, reveal how aspects of their personal histories impact on their teacher preparation. Most of those with at least some school experience seemed to find the transition to teaching fairly straight forward. Of those with much less experience some, such as Marie, seemed to find the transition straight-forward

whilst others, such as Harry, had much more difficulty. Of the mature career changers, Anna, Marie and Kate explicitly identified that their prior experiences had been of benefit in becoming a teacher. Harry, a former Army Infantry Officer, Elaine who had been an actuary, Paul and Sally, who was returning to the workplace following raising a family, all failed to make sufficient links between their prior experiences and teaching. Griffith's (2007) research found that some mature career changes found it difficult to make the transition to being a learner again and receiving criticism, but this study did not find this necessarily to be the case. For neither Sally nor Elaine, whose experiences are reported in section 5.2.1, was the difficulty really about these issues.

It is clear that the personal qualities of pre-service teachers are of importance and, as Chambers et al. (2010) suggests, not everyone has the necessary qualities, nor the necessary resilience to become a teacher. Billett (2008) also identifies that personal attributes make up part of a learner's cognitive experience and shape their engagement with experiences. He further points out that individuals play an active part in the learning process where they can choose how to, or whether, to respond to a learning experience.

What the expansive/restrictive model does not draw out are some of the complexities inherent in teacher preparation and particularly in terms of the personal circumstances of individual pre-service teachers. For example, someone who has been working as an unqualified teacher for some time in a school may feel that a traditional university-led model is not very suitable for them. In some secondary school subjects government bursaries for pre-service teachers are very small and a pre-service teacher may decide that following a salaried teacher preparation route is preferable for financial reasons. The nature of the expansive/restrictive continuum suggests a dichotomy, but for individuals, the situation may be more nuanced than this. For example, being considered an employee may raise the status of the pre-service teacher in the eyes of their pupils and other staff and therefore may confer benefits.

6.10 Conclusions

The data analysis and discussion reveals some broader themes regarding teachers' experiences on an employment-led route to secondary school teaching.

Chapter 6: Further analysis and discussion

Teaching is relational: connecting teacher to teacher (see sections 5.2.3, 6.2.1 and 6.7), to pupils and to the context in which they work. Hence developing relationally is an important process for pre-service teachers and these are interdependent. In order to manage these relations the teachers interviewed needed to use what Archer defines as ‘reflexivity’: “the regular exercise of the mental ability, shared by all normal people, to consider themselves in relation to their contexts and vice versa” (2007, p.4). This reflexivity is also defined by Dyke as the “constant transformation of information, the creation, construction and renewal of knowledge” (2009, p.295). Evidence of the interviewees thinking in this way is contained in section 5.2.3. Hence learning to teach is a reflexive and relational process in the school context.

Evans et al. identify workplace learning as being:

about the relationships between the human and social processes of learning and working, these relationships have to be understood both at a personal level and the organisational level...as well as in wider societal terms (2011, p.150).

Billett proposes that learning is a “duality comprising a relational interdependency between personal and social contributions” (2011, p.61).

These views of workplace learning resonate with the analysis in chapter 5 and discussion in section 6.7.

In sections 6.9, 6.2.1 and 6.2.5 the teachers are seen trying to ‘make sense of’ what they already knew, or thought they knew, about teaching, about their subject, about young people and refining it in ways that allowed them to bring it to bear on their work in school. Evans et al. identify this as learner recontextualisation. They describe as being how the learner “brings together knowledge from prior experience and working with others to forge/reshape/develop identities” (Evans et al. 2011, p.157) and as “putting different kinds of knowledge to work in different ways according to context” (*ibid.* p.157). Evans et al. go on to identify that “recontextualisation processes vary according to personal characteristics, group/cohort and the scope for action they have in any particular environment” (2011, p.157). They also assert that recontextualisation takes place through the learner working with the knowledge gained from both their programme and from experienced practitioners.

Emerging from the discussion in section 6.2.2, the pre-service teacher can also be described as being 'transformed' from their previous employment to a career as a teacher. The analysis and discussion identifies the importance of developing teacher identity, and the importance to the teachers in the study of developing professional and situated teacher identities during their teacher preparation.

Chapter 7: Conclusions and reflections

7.1 Introduction

In concluding this study, this chapter summarises the findings in relation to the research questions and draws together some of the methodological threads and findings in relation to quality, generalisability and limitations. It also argues the case for the originality, applicability and insight contained in this study into the learning of those on an employment-led route to secondary teacher preparation. The study identifies fundamentally differing understandings as to the nature and purposes of teacher preparation (section 7.2) and the complexity of both teaching and teacher preparation (section 7.3). Clear connections have been made in this study between employment-led teacher preparation and expansive/restrictive features of apprenticeship (Fuller and Unwin 2008), identifying features of apprenticeship present in this route for teacher preparation. These are summarised in section 7.4.4 and developed in the recommendations made in section 7.10.

7.2 The purposes of teacher preparation

Underpinning this study is a fundamental question about the purpose of teacher preparation. Section 6.2.3 makes reference to different teacher preparation programmes having different aims. Valencia et al. (2009) describe the tension felt by the pre-service teachers in their study between 'fitting in' and 'experimenting', thus reflecting numerous tensions of this kind identified in both the literature and the analysis in this study. Fundamentally, however, there is a lack of clarity as to who decides, or even who should decide, the purposes and content of teacher preparation.

Section 2.9.1 discusses the diversification of teacher preparation routes in the U.S.A., which has parallels with the move to more of the teacher preparation in England being through school-led programmes. The perceived need for such programmes raises important questions about the place, content and relevance of university-led teacher preparation in both the U.S.A. and England. In England, government is coming under increasing pressure regarding teacher shortages (Coughlan 2017). In addition, the increasing diversity of routes into

Chapter 7: Conclusions and reflections

teaching and the incentives available to those who undertake teacher preparation speak to increasing concern about shortages. There is also a clear political imperative at work in England, where the academy and the government appear to hold fundamentally different views about the nature and purposes of teacher preparation and pre-service teachers are 'caught in the middle'. Choice, diversity in provision and a degree of marketisation appear to be features of teacher preparation in both the U.S.A. and England (see sections 1.4.3, 1.4.4 and 2.9.1). However, in my personal experience, many prospective teachers have limited opportunities to gain appropriate advice to inform their choice of a preparation route so the choice and diversity available can be difficult to navigate.

7.3 Context and complexity in teacher preparation

The findings in chapter 6 identify both that the school context is important, but also that there is a great deal of complexity around learning on an employment-led teacher preparation route, reflecting Atwal's view that:

The possibilities for learning at work depend upon the interrelationship between individual worker dispositions, the affordance of the workplace to provide a restrictive or expansive learning environment, and the influence and direction of government policy, rather than upon any one of these factors taken in isolation (2013, p.22).

Other literature supports the findings that teacher preparation on an employment-led route is complex and highly context-dependent. Eraut understands learning to be "significantly influenced by the context and setting in which it occurs" (2009, p.65). Further, Moore-Johnson and Birkeland suggest that "factors are not simply additive but interact in complicated ways" (2008, p.108) and Humphrey & Wechsler hold the view that:

teacher development in alternative certification appears to be a function of the interaction between the programme as implemented, the school context in which the on-the-job training occurs, and the career trajectory of the individual participant (2007, p.521).

Moore-Johnson & Birkeland's findings from their survey of alternative certification programmes are that the variation in programmes and schools mean that "success is hard to predict" (2008, p.108) and that "no programme

is the sole (or likely even the primary) factor in determining a new teacher's success or failure" (*ibid.* p.109). This study resonates with these remarks.

7.4 Research questions

In order to answer the research questions the findings from chapter 6 were mapped to research questions 2, 3 and 4 as shown in Table 13. References in the table are to the sections in this thesis.

Table 13 Findings mapped to Research questions 2, 3 and 4

RQ2: Insights as to meaningful experiences	RQ3: Key developmental processes impacting on learning and experiences	RQ4: Views about teacher apprenticeship
<p>Importance/value of collaboration with other pre-service teachers and other teachers (6.2.1)</p> <p>Sense of belonging (6.5)</p> <p>Observing the practice of others (6.5 & 6.6)</p> <p>Imitating the practice of others (6.5)</p> <p>Practising (6.6)</p> <p>Private practice and experimentation (6.6)</p> <p>Understanding the role and function of the teacher (6.5)</p> <p>Being employed by the school (6.5 & 6.6)</p> <p>Longevity/familiarity/relationships in the school context (6.5)</p> <p>Full participation in the workplace (6.6)</p> <p>Participating in the life of the school (6.8)</p> <p>Sense making of prior experiences (6.9)</p>	<p>Transforming into a teacher (6.2.2)</p> <p>Developing identity as a teacher (6.2.5)</p> <p>Developing relationally through reflexivity (6.10)</p> <p>Recontextualising (6.10)</p>	<p>Fixed as restrictive (6.2):</p> <ul style="list-style-type: none"> - Status - Breadth - Structural need - Access <p>Fixed as expansive (6.2):</p> <ul style="list-style-type: none"> - Participation - Participative memory - Qualification - Balance <p>Variable (6.2):</p> <ul style="list-style-type: none"> - Collaboration (6.2.1) - Transition to teaching (6.2.2) - Aims of programme (6.2.3) - Career future (6.2.4) - Identity (6.2.5) <p>Difficulties with content knowledge and pedagogical content knowledge (6.3)</p> <p>Difficulties with deeper levels of reflection (6.4)</p> <p>Preference for practice over theory (6.6)</p> <p>Complexity of relationships in the workplace (6.7)</p>

Chapter 7: Conclusions and reflections

		<p>Dual role as both learner and worker (6.7)</p> <p>Loyalty to school (6.7)</p> <p>Novice-master/expert relationship (6.7)</p> <p>Access to expertise (6.7)</p> <p>Range of experience (6.7)</p> <p>Status (6.5, 6.6. 6.7)</p> <p>Situatedness (6.8)</p> <p>Readiness for teaching (6.5 & 6.8)</p> <p>Biography (6.9)</p>
--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

7.4.1 Question 1

What differences are there in the self-efficacy of newly qualified secondary school teachers who had followed school-led teacher preparation routes compared with those who had followed more traditional postgraduate routes?

The key finding regarding the first question is that there is little difference in mean self-efficacy between those on school-led routes and those on university-led routes (see section 4.3), although the survey results identify greater variation within school-led programmes than within university-led programmes. Section 6.2 identifies that the interview data supports these findings and section 4.8 demonstrates that the similarity in mean scores between programmes is unsurprising given the close relationship between the TSES questions and the English Teachers' Standards (see Table 9). That those who followed school-led programmes felt a high degree of self-efficacy and felt 'classroom-ready' is considered unsurprising, given the quantity of lessons many of those on school-led, and employment-led programmes in particular, teach over the course of their teacher preparation year.

In support of the literature discussed in sections 2.9.1 and 2.9.2, section 6.2.3 suggests that different preparation programmes may have different aims. Section 2.2 also indicates that there are different understandings of the role of the teacher, the knowledge needed and how it is acquired. Routes that are employment-led, and for those who are non-supernumerary in particular, may privilege some kinds of teacher knowledge to the detriment to other kinds of knowledge. Different teacher preparation routes may also be underpinned by different conceptions as to the role of the teacher. However, the English Teachers' Standards (Department for Education 2011) are the same for all and, in these respects, may unintentionally privilege some routes over others.

7.4.2 Question 2

What insights are provided by teachers who had previously followed an employment-led secondary teacher preparation route as to the meaningful experiences they had whilst undertaking teacher preparation?

As can be seen in Table 13, those teachers interviewed identified a number of experiences that had meaning for them when looking back at their secondary teacher preparation on an employment-led route. These experiences were mostly positive, as expressed in the table, but a small number of those interviewed either did not mention particular aspects or viewed them negatively.

Aspects relating to 'practising' were deemed as been meaningful, in terms of observing others teaching, imitating the teaching of others, as well as classroom teaching and trying things out in the privacy of their own classroom without another teacher supervising or watching. Being in the school setting for an extended period gave teachers opportunities to feel part of the community, to develop relationships with staff and pupils and to be involved in the life of the school in a range of ways. It meant that they felt that they 'belonged'. Other experiences identified as meaningful were collaborating with others and opportunities to draw on previous experiences in order to apply them to their new experiences as a teacher.

7.4.3 Question 3

What are some of the key developmental processes identified by teachers as having impacted on their own learning and on their experiences on an employment-led teacher preparation route?

The analysis indicates four processes in the teachers' accounts that were at work over the pre-service period. Table 13 identifies one of these as the developing of identity as a teacher which interviewees talked about at length and in different ways in their interviews. They found teaching to be strongly relational, requiring reflexivity in order to work effectively with both staff and pupils in the school context. Teachers were further found to be undergoing transformation during their preparation as they moved from their previous roles to that of a teacher. Part of the transformation and identity development of the teachers involved recontextualising through seeking to make sense of their prior learning and experiences and seeking to apply it to their new context.

7.4.4 Question 4

What do the views of participants tell us about teacher apprenticeship through an employment-led route as a model of teacher preparation?

Table 13 provides a summary of the study's findings with regard to research question 4 and the links to the sections of the thesis providing greater detail for each item.

One of the key features of situated learning and apprenticeship is legitimate peripheral participation. Section 5.2.1 identifies that this was an area where there was some variation in interviewees' experiences, especially as some had been non-supernumerary and taught at least some classes independently from the beginning of the school year. Most of the participants commented positively on their rapid transition to teaching and some expressed a preference for not receiving 'special assistance' in the form of frequent observation feedback. Many felt that they had been participating fully as teachers whilst undergoing teacher preparation and were prepared to 'learn from their mistakes'. Throughout chapter 5 there is a strong thread regarding the dual nature of participants' experiences as both learner and employee. The teachers had regarded themselves as those who had much to learn about teaching whilst also viewing themselves as employees of the school undertaking the role of the teacher and gaining considerable credibility from this. Some viewed themselves as strongly suited, both by nature and by virtue of their experience, to 'learning by doing', and were dismissive of what they saw as the more theoretical approach of a university-led preparation route.

A second key feature of situated learning is that of communities of practice. Those interviewed valued the opportunities they had to be parts of groups with a common learning focus with other pre-service teachers and with practising teachers in the school. These communities were both informal and formal in nature and were often described as also providing emotional support and encouragement for the pre-service teachers.

The situated nature of the experience provided valuable opportunities to practice teaching and to work 'things' out in private, which they found satisfying. Being situated in the school also provided the opportunity for some pre-service teachers to self-direct their experiences by making their own choice

of who they observed teaching. They were afforded the opportunity to observe ‘expert teachers’ or those they considered similar in some way to themselves. Being situated in a school lent credibility to the pre-service teacher, in their view, in the eyes of both pupils and staff, along with being in the school for almost all the academic year and being a salaried member of staff. Being situated afforded the opportunity to gain knowledge of a very practical type of immediate use – hints and tips – and the opportunity to learn through experimentation.

Hence, the teachers’ views indicate that aspects of apprenticeship were present in their employment-led route to teacher preparation but varied between participants. The data indicates that teachers valued full participation and being situated in the school context, whilst recognising that they were learners. Modelling teacher preparation as apprenticeship gives high value to a situated learning approach. This places teaching in school as central in the learning of beginning teachers with the school mentor as master teacher and within communities of practice. Section 6.7 identifies that this is not always the case. Learning that is situated is highly contextualised and very specific; section 2.3.1 suggests that this sort of learning is not easily transferable. The nature of employment-led teacher preparation is that it is of this type (by design).

7.5 Claims about quality

The validity and reliability of the TSES tool used to collect the self-efficacy data is discussed in both section 3.8.3 and in chapter 4. This fits with traditional quantitative understandings of both validity and reliability. However, as the literature in section 3.4.2 indicates, claims are made differently regarding quality for studies using qualitative data (Tracy 2010).

Following the argument made in chapter 3, chapters 3, 5 and 6 provide the detail for the qualitative element of the study. Claims about quality are also supported by a reflexive approach on the part of the researcher which acknowledges the impact on, and relationship of, the researcher with participants (Maxwell 2012), data, analysis and findings (Pelias 2011) and “value awareness rather than value-removal” (Sobh and Perry 2006, p.1205). Pelias goes as far as suggesting that the work of researchers is always “partial

Chapter 7: Conclusions and reflections

and partisan” (2011, p.664). The emphasis is therefore on the reader to decide whether the arguments are convincing and whether they are supported by the data.

As Eraut (2000) found, it is difficult for study participants to describe their work, their learning and their knowledge and understanding. Hence, this study does, at least in part, stand or fall on my skills as an interviewer. The small number of teachers interviewed means that they are not fully representative of secondary school subjects. In some cases, there were very few potential interviewees who fitted the criteria of being funded as salaried through the NCTL (as opposed being privately- or self-funded) and the response rate to invitations was low overall. As noted in sections 1.4.4, 2.9.2, and throughout this study, there is considerable variation both within and between teacher preparation routes. However, the intention was not try to generalise by suggesting that the sample is representative in some way (see section 3.9.1); generalisation is discussed further in the next section.

7.6 Generalisation

As with quality, generalisation is considered separately for the qualitative and quantitative elements of this study. With regard to the latter, chapter 4 discusses the difficulties with data collection and these limit the generalisability of the findings. The response rate was low and the sample was distinguished on the basis of being either university- or school-led, with as much variation programmes within as between them (see sections 1.4.4 and 2.9.2). The data from the survey was deliberately analysed in the same ways as the data from other studies in order to make cautious comparisons.

As noted in section 7.5, the qualitative element to this study neither has, nor needs, a representative sample in a positivist sense; however it does report and analyse the views from a number of teachers following employment-led teacher preparation through one university.

Patton suggests five principles that can be used for generalising from a study:

“proximal similarity” (2002, p.581) where generalisation can be made by extending findings to similar circumstances;

“heterogeneity of irrelevances” (*ibid.* p.581) where findings hold over some degree of variation;

“discriminant validity” (*ibid.* p.581) where the target construct is shown to produce the finding,

“empirical interpolation and extrapolation” (*ibid.* p.581) where findings are specified to hold in a range of circumstances; and

“explanation” (*ibid.* p.582) where one can specify precisely how the findings can be transferred.

Bearing Patton’s findings in mind, it is therefore possible to say that the findings from this study have relevance and applicability to pre-service teachers on other secondary employment-led routes. Merriam and Associates helpfully suggest that such generalisations can be thought of as “working hypotheses that take into account local conditions” (2002, p.28) having utility for practitioners in supporting decision-making. Whilst the findings from this study hold for a number of secondary school subjects, the composition of the sample (see section 3.9.1) means that the findings do not necessarily hold for those learning to teach subjects with a more practical nature and do not extend to those learning to teach at the primary level. Whilst the employment-led route under consideration in this study is still evident as part of the teacher preparation landscape in England, it is no longer as ‘new’ as it was when this study started. It is therefore likely to have become more embedded into institutions and practice, and it now runs alongside teacher apprenticeships (see section 1.4.3), with which it has some similarities. The findings all draw extensively on both the analysis of the data in this study and on literature in relevant fields, and the latter is part of the claim for the potential usefulness of these findings for other teacher preparation programmes and in other locations, including other countries.

7.7 Limitations

Anderson and Stillman (2013) observe that too many studies focus on individual teacher preparation programmes and on those programmes facilitated by the researcher themselves, and this is true of this study. Patton suggests three kinds of sampling limitations for qualitative research: “in the situations that are sampled” (2002, p.563); arising “from the time periods during which observation took place” (*ibid.* p.563); and “based on selectivity in the people sampled” (*ibid.* p.563). As discussed in the previous section, generalisation is limited by the sample and the study may have a time-limiting

Chapter 7: Conclusions and reflections

element. The access issues discussed earlier also provides potential for bias, although section 3.9.1 documents my attempts to overcome this.

Certainly interviewing only teacher participants reveals one set of perspectives on employment-led teacher preparation, but this followed from the framing of the research question. Collecting data from others involved in employment-led teacher preparation would have provided different perspectives and answered different research questions. I might have collected additional data, for example, through lesson observation, reports from employing schools or self-efficacy scores from those interviewed. However, the value in gaining additional data and insight would need to be considered against the possibility that some teachers would not have wished to participate in the study had there been observation or reports of their teaching or more data collection. Again, the framing of the research questions focuses on the perceptions of participants so these other sources of data are not needed.

The qualitative data was collected through semi-structured interviews so the study is, inevitably, limited by what I asked and how I asked it as well as what was possible to collect in a length of time that was considered to be not too onerous on participants. The use of apprenticeship as a framework was seen as a way of trying to promote discussion effectively about the key areas. Inevitably self-reported data is difficult to verify and subject to respondents being selective, misremembering, and exaggerating their stories. My experience as a teacher educator mitigates these effects to some extent in that they knew my professional role and were likely to have responded to it in some way. As with all studies of this nature a degree of subjectivity on my part should be considered, although, as discussed in section 3.3 I sought to continually challenge my personal views and influences as I worked.

7.8 Contribution and originality

This thesis has a number of significant features. Firstly, whilst Muijs et al. (2012) surveyed Teach First teachers regarding their self-efficacy, I have been unable to find other research literature surveying English teachers in this manner. Hence, despite its limitations, the self-efficacy survey undertaken for research question 1 provides important findings as to the high levels of self-

efficacy and the degree of variation in scores, of a group of recently trained English teachers.

The main focus of the study through research questions 2, 3, and 4 was on the perceptions of a group of secondary school teachers who had previously completed an employment-led route to teacher preparation. As argued previously, the views of those who have undertaken such programmes are under-represented both in the teacher education literature as are the views of those who have followed apprenticeships in other fields. Table 13 and section 7.4 detail the key findings regarding their experiences on the programme and hence provide new and fresh insight into the experience of those undertaking such a route to teaching preparation. As such routes become more commonplace and embedded, both in England and elsewhere, such insights gain increasing value in helping pre-service teachers and others understand their experience. As part of the study a revised expansive/restrictive continuum (Figure 10) was developed; this has value as a tool for analysing pre-service teachers' experiences on a range of teacher preparation routes and has potential for further development.

The study therefore responds to Consuegra et al.'s view that:

Research needs to untangle the interaction between different features of divergent programmes, school contexts and teacher candidates to identify the essential ingredients needed to produce desired learning outcomes. Further investigation is therefore needed and should focus on the quality of practice and the workplace conditions in which the field-experiences are gained, rather than the amount of practice. It is the workplace learning conditions that make all the difference in assuming that prospective teachers learn the desirable lessons from practice (2014, p.80).

The connection made in section 2.9.1 between Urban Teacher Residencies and school-led programmes in England, and the previously-referred to global spread of Teach for America type programmes (section 2.9.1), demonstrates the value and applicability to this work more widely than the English system.

This study seeks to contribute to knowledge through helping to address a gap in understanding about teacher preparation. Anderson and Stillman, in their review of research in preparing teachers for urban and high-needs contexts,

Chapter 7: Conclusions and reflections

find that “overall, factors mediating PSTs’ learning receive particularly spotty attention” (2013, p.48), and that there is a “relatively slim body of evidence concerning what and how PSTs learn from student teaching” (*ibid.* p.48). There is also a gap in the workplace learning field; Fuller and Unwin (2011) say that more empirical work is needed giving voice to employee (pre-service teachers on employment-led routes in this case) perspectives and that there is a need to understand more about the nature of the learning undertaken by employees. A third gap is located at the intersection of the two, where teacher preparation has not been well-theorised as workplace learning and there is little integration between research on the two (Murray et al. 2014).

7.9 ‘Fragility’ as a descriptor of teacher preparation

A key finding Chankseliani et al.’s report comparing apprenticeship across eight countries suggests that apprenticeships are “inherently fragile because of their vulnerability to political and corporate pressures” (2017, p.v). This view strongly resonates with the findings here (where the ‘corporate’ role is taken by the employing school). The fragility of apprenticeships in teacher preparation is evidenced by the variation within programmes. It is a function of the importance of the school context as a learning environment, the individual biography, disposition and characteristics of the individual pre-service teacher as a learner and is, critically, a function of effectiveness of developing relationally in the school context. It is also a function of the interaction of all these factors. Very early in the study the first steps of analysis identified the relationship between the pre-service teacher and their curriculum mentor, the relationship between theory and practice, and culture and relationships in the workplace as emergent key themes.

Chankseliani et al. further find that “It is clear that apprenticeships are harder and more complex to provide than classroom-based forms of skill acquisition” (2017, p.89). The quote does not identify whether or not the classroom is an effective place to learn some skills, or whether it is even possible to learn some skills in the classroom. However, it is not surprising that learning a complex skill such as teaching through apprenticeship, which is itself described as complex, is a challenging undertaking for all involved. Given the announcement of post-graduate apprenticeships for teacher preparation to start in September 2018 and commitment from government to launch

undergraduate teacher apprenticeships (see section 1.4.3) these findings are both important and timely.

7.10 Relevance

This section suggests ways in which the study's findings are relevant to different audiences in teacher preparation and some ways in which the findings might impact on practice. Rather than apply as many findings as possible to each group, a few for each are given prominence.

7.10.1 Pre-service teachers

The study identifies the value of good content knowledge on the part of the pre-service teacher prior to teacher preparation and that this knowledge needs to be at a sufficient level to allow them to draw on its breadth and depth when teaching. Pre-service teachers need also to recognise and value their prior learning and experiences of all kinds and draw on those as they develop as teachers. Teachers in the study valued opportunities to work with and gain support from others, from both pre-service teachers and more experienced teachers in school. The study further suggests that schools within one employment-led programme have some features of their provision for pre-service teachers that differ, so pre-service teachers should ensure that they know and understand the specifics and expectations of their employing school.

7.10.2 Mentors

The study finds that the novice-expert relationship is both complex and central to the experience of pre-service teachers on an employment-led programme. Pre-service teachers look to mentors to be the 'experts' in teaching but mentors also need to ensure that they recognise the other kinds of expertise that pre-service teachers bring with them. They value highly opportunities to observe the practice of others as well as to practice teaching themselves, including imitating others and experimenting in the classroom. Mentors have an important role in supporting observation and practice including providing opportunities for unobserved experimentation, should the pre-service teacher request it, and to ensure that observation is meaningful.

Chapter 7: Conclusions and reflections

7.10.3 School leaders

Schools, and the impact of school-leaders, are of increased importance for those following an employment-led route to teacher preparation. The school provides the employment status that is highly valued by pre-service teachers, they are generally very loyal to their employing school, and this status contributes strongly to their sense of belonging and identity as a teacher. The school context and environment provides them with familiarity and longevity of experience, which allows them to develop relationships with staff and pupils and with opportunities to participate fully in the life of the school. School leaders need to recognise the dual role those on an employment-led route have as both learners and worker, especially when arranging non-supernumerary elements to their employment, in order to ensure that commitments in school do not have the effect of truncating their training. Those following such a route generally indicate that they feel well-prepared for their NQT year and the study also suggests that they potentially have high levels of self-efficacy.

7.10.4 University-based teacher educators

The study indicates that those on an employment-led route, unsurprisingly, see their school employment as the central element of their teacher preparation. Pre-service teachers said that they valued practical learning through teaching, and the feeling of most was that theory (taken here as non-school based elements of preparation) was of limited value. There is a need for teacher educators to ensure that theory is communicated accessibly and in a connected way, and that the time spent away from the school provides opportunities for reflection, for pre-service teachers on such a route. The study also provides insight into the experiences, and challenges individuals face, and therefore promotes better understanding across routes, especially for teacher educators working simultaneously with pre-service teachers following multiple routes.

7.10.5 Government

For government, the study supports the continuing need, despite teacher shortages, for potential teachers to be subject knowledge specialists prior to postgraduate teacher preparation. It also indicates the value of prior learning

and experiences to those undertaking teacher preparation. The study also speaks to aspects of apprenticeship as a model of teacher preparation, particularly relevant given developments in this area (see section 1.4.3). Employment-led teacher preparation is clearly attractive to some potential teachers, especially given that they do not have to pay tuition fees and that, for some pre-service teachers the salary offered is more than a potential bursary would be for a 'training' route. Some of the strengths of the programme are indicated as lying in its situatedness in the school context, the extensive opportunities provided for practice in classroom teaching and the value pre-service teachers found in their status as employees of the school. The risks (or 'fragility' as the term used in section 7.9) relate to the potential variation in experience between schools and the dependence on the circumstances in the individual school. Individual schools within one programme enact the programme quite differently given that some pre-service teachers are fully supernumerary for the whole year and some are fully non-supernumerary. Where pre-service teachers feel that they are receiving insufficient support, they have insufficient access to expertise, a limited range of experience and their transition to teaching is too rapid and isolated, then their experience is very difficult. The system would benefit from some checks and balances to address potential inequities and to allow those with difficulties the means to gain additional support and advice.

7.11 Implications

Section 1.4.1 identifies that teacher preparation in other European countries is firmly located within universities and is positioned as both an educative and an academic undertaking, whilst also comprising of a practice element. The findings in this thesis indicate that employment-led teacher preparation in England is very different. It reframes teacher preparation as a craft, diminishing the more theoretical elements valued elsewhere in Europe in favour of practical classroom experience. Theory is seen by those who follow such routes as being of limited value and as being available for 'those who need it', 'those who lack life experience' or 'those who are not able to learn through practical experience'. Such programmes position teaching as an unproblematic endeavour, lacking in complexity such that learning through practising with limited or no guidance is an acceptable, or even preferable, way

Chapter 7: Conclusions and reflections

to learn. The study also makes it clear that employment-led programmes have different goals to more traditional university-led programmes.

Employment-led programmes bring both responsibilities and challenges for the schools involved. The analysis makes it clear that success or failure on this route is often seen by pre-service teachers as being closely linked to both their relationship with their mentor and the quality of mentoring. Hence, schools have a responsibility to ensure that they fulfil the expectations of those undertaking this route in terms of identifying skilled mentors who are excellent classroom teachers, and through ensuring they provide sufficient support. In many ways the risks are higher with employment-led programmes because the university is not able to provide a 'safety net' in the way that it might do for those on more traditional programmes, where they might, for example, intervene to change placements. Whilst one might see the advantages to schools of a programme where they 'grow their own' through identifying potential teachers, training them to be 'classroom ready' quickly and then employing them, there is potential for this to be a limiting experience and one where learning for the pre-service teacher might be cut short. For some of the teachers interviewed in this study, the 'grow your own' route also had them undertaking teacher preparation and then teaching in the school they had attended as a pupil.

Pre-service teachers on employment-led routes have different needs to those following more traditional programmes. They tend to teach more lessons and start teaching earlier in the academic year than those on other programmes. They spend more time in their main school placement and generally feel a strong sense of loyalty to this school through being in their employment and, hence, they tend to become focused on localised patterns of behaviour ('the school way of doing things'). The outcomes of such programmes are highly focused on classroom practice and the English Teacher's Standards and potentially less focused on the research-informed and critical approaches to education favoured by more traditional programmes. It is important that teacher educators, both school-based and university-based, as well as pre-service teachers, understand and appreciate the differences between programmes in terms of outcomes, philosophical orientations and approaches to pre-service teacher learning.

The complexity of choice of route and provider in England means candidates often find themselves making important choices without understanding the differences between programmes. Further, in the context of teacher shortages, the resultant competition between teacher preparation providers is potentially unhealthy and could lead to inequity within the system. What we are also starting to see is localisation of teacher preparation in England whereby groups of schools run their own preparation programmes supporting very specific approaches to teaching and learning. Such diversification could reduce teacher mobility and development as well as increase diversification and inequity in the experiences of both teachers and pupils. A key distinctive of employment-led routes in England is that candidates need to have at least three years of any kind of work experience prior to starting the programme. What is not clear is the basis on which such work experience entitles the pre-service teacher to, potentially, bypass the theoretical content provided by university-led programmes and by other programmes across Europe. Further, this study identifies content knowledge as an essential underpinning to teacher preparation and, that there are no ‘shortcuts’ for gaining this – having some of the other skills needed by teachers such as good classroom management does not make up for a lack of content knowledge.

The potential consequences in terms of quality of teachers and teaching, retention of teachers and career futures of such a large-scale experiment with teacher preparation are, as yet, unknown. Those in other countries would do well to think carefully before following suit because it is difficult to see how one can ‘undo’ such an experiment.

7.12 Personal reflection

As a teacher educator, the study provides some important insight into the perceptions and experiences of those who have chosen an employment-led route to teacher preparation. I have a renewed respect for those who choose such a path but I am also increasingly aware of potential inequity between schools even within one programme.

It is interesting to consider whether the degree of shortage of teachers, particularly in some subjects, actually led to a policy of refocusing teacher preparation as apprenticeship in schools in order to ‘produce’ ‘school-ready’

Chapter 7: Conclusions and reflections

NQTs through ‘immediate practice-oriented preparation’. It is possible, given increasing shortages, and a decline in the numbers undertaking teacher preparation, that this policy has actually led to an increase in shortages – the reverse of the intention.

Olsen’s comment sums up my own view of teaching: “teaching is not merely a cognitive procedure but a complex, personal, social, often elusive, set of embedded processes and practices that concern the whole person” (2008, p.5). I think this makes teacher preparation a monumental challenge, particularly in the contexts that run as themes throughout this study. Teaching is science, art and craft and requires a balance of all three. Teaching as a craft should be celebrated if the result is a well-made, finely-honed, useful and enduring product. Whilst mass-production has its place and economies of scale are both valuable and necessary, teaching seems too complex to wholly follow such an approach.

7.13 Future research directions

A number of future potential lines of investigation are suggested by this study. Firstly, the adapted expansive/restrictive framework would bear investigation in terms of how the framework applies to other programmes and types of teacher preparation route. A different study might consider the views of others such as mentors, teacher educators and school leaders who are stakeholders in the preparation of teachers to see what their perspectives are regarding employment-led teacher preparation.

University-led programmes may not be in a position to, or may not want to, offer context-specific preparation in the form of Urban Teacher Residencies. This may be due to cohort size and because they work across school networks and often across large geographical areas. However, there would be value in identifying the distinctiveness and differences in programmes more explicitly. The distinctive features of Teacher Residencies discussed in section 2.9.1, along with their close working with a specific school district with homogenous schools, are not yet reproduced to any great extent in the school-led programmes in England. Nor would it be possible for university-led programmes, and many school-led programmes, to take such a context-led approach because their school placements are likely to be diverse in nature. It

is also, as yet, unclear as to the potential impact of highly localised teacher preparation on teacher mobility for career advancement and promotion. There would therefore be value in studies to further explore these issues and in a longitudinal study or data analysis tracking those from employment-led routes over time through the first few years of their teaching career.

7.14 Conclusions

Political imperative clearly plays a significant part in teacher preparation. This is important to acknowledge especially given concerns such as Philpott's that restrictive models could start to be used to "justify developments driven by resources and ideology" (2014, p.44). This study gives insight into what teacher preparation without an academic element could become and heightens awareness of the need for what Grossman (1990) says is the shaping framework and conceptions about teaching that teacher education provides and beginning teachers need.

Apprenticeship as an approach to teacher preparation is not all bad by any means, although the model would benefit from further development. One proposal with potential is that from Orchard and Winch of a two-phase framework for teacher preparation with an apprenticeship phase following initial qualification and they go on to state that they:

have no principled objection to training routes in which entrants to the profession are apprentices from the start, *provided that there is the same level of university-based provision as in our two phase model* (2015, p.32).

Certainly teacher preparation would be very much the worse without school-based learning to provide opportunities for "observation, apprenticeship, guided practice, knowledge application and enquiry" (Feiman-Nemser 2001, p.1024) and research and practice in workplace learning has application to teacher preparation.

Back in section 2.10 the literature on preparation routes was summarised with the identification of six fruitful avenues for investigation. Revisiting these, it is clear from this study that different teacher preparation routes have different goals and that employment-led routes have different practices to other, more traditional routes. The voices of those following such routes in this study

Chapter 7: Conclusions and reflections

suggest that they consider themselves as having different needs to those on more traditional preparation routes.

This study does not, and never sought to, identify which prospective pre-service teachers may be suited to which preparation routes and it is possible that some of those interviewed ended up on a route for which they were not well-suited or one that was not what they anticipated. The study does, however, give those on an employment-led programme a voice to express their experiences and insights on such a programme. These voices say much about the perceived needs of those on employment-led routes, and provide indicators as to the needs of those following other routes. That teaching and teacher preparation are complex is a recurring theme in this study, along with identification of the importance of school context, of relational development, and of developing identity.

Appendices

Appendix 1: A historical perspective on teacher preparation in England

Appendix 2: A historical perspective on apprenticeship across professions

Appendix 3: Adapted expansive/restrictive continuum

Appendix 4: Ethics approval (self-efficacy survey)

Appendix 5: Survey

Appendix 6: Participant information sheet (survey)

Appendix 7: Pen portraits of interviewees

Appendix 8: Ethics approval (interviews)

Appendix 9: Code descriptors

Appendix 10: Participant information sheet and consent form (interviews)

Appendix 11: Interview schedule

Appendix 12: Transcript excerpts

Appendix 1: A historical perspective on teacher preparation in England

Between them, Keating (2010) and Sheldon (2011) provide detailed chronologies of the development of teacher preparation in England, and Bernbaum et al.'s (1985) account takes a narrower focus on the development of the role of universities in postgraduate teacher preparation. These sources identify that some of the current issues and controversies in teacher preparation are long-standing. For example, when discussing the second half of the 19th century, both Keating (2010) and Bernbaum et al. (1985) identify concerns at the time about both the lack of status and the poor quality of provision from training colleges. The complexity of preparation routes over the last 250 years is also clear in the work of both Keating and Sheldon, and again this is a feature of provision today.

From the start of organised mass education in England there were unqualified teachers working in schools. Keating says that in "1900 nearly a quarter of the teaching force were pupil-teachers" and that there was recognition that, "if teaching standards were to improve, the training and education of pupil-teachers must improve first" (2010, p.4).

Events on the world stage, politics and economic conditions have also frequently had an impact on education and on the preparation of teachers. Following World War 1 there were political changes in perceptions about education and Keating says that at this time there was "growing discussion about the nature of teacher training. How academic should it be? How long? What qualifications were necessary?" (2010, p.7).

Teacher shortages and quality of applicants for preparation programmes are also recurring themes. Following World War 2 there was an increased need for teachers following the raising of the school leaving age so an emergency scheme was set up aimed particularly at ex-service personnel. The obvious connection here is to 'Troops to Teachers' announced in June 2013 (Burns 2013). Keating (2010) suggests that by the late 1950s there was a surplus of those qualified to teach subjects such as English and history and a shortage of those qualified to teach science, mathematics and technical subjects; a situation that persists, in some respects, today.

Appendices

It is interesting to note that both Keating (2010) and Bernbaum et al. (1985) comment on the demands made on pre-service teachers by their preparation programme with Bernbaum et al. identifying that those on undergraduate education programmes as having the dual demand of academic expectations and their professional programme.

The work of Bernbaum et al. also focuses on the development of the relationship between teacher education departments and their host universities suggesting that “early difficulties established a pattern of institutional and status relationships which university departments have found it difficult to unravel even after 70 years” (1985, p.13). Such difficulties were exposed by the lower level of entry qualification required for education degrees which led to these students appearing to achieve less well against standard university criteria. There were also class differences, with those preparing to teach being of a lower class than the traditional university students and status problems that Bernbaum et al. attribute to the low status of teacher preparation because of the “association with schools and its narrow vocational base” (*ibid.* p.17). Today, there remain concerns about the under-representation of minority groups in teaching (Rhodes 2017).

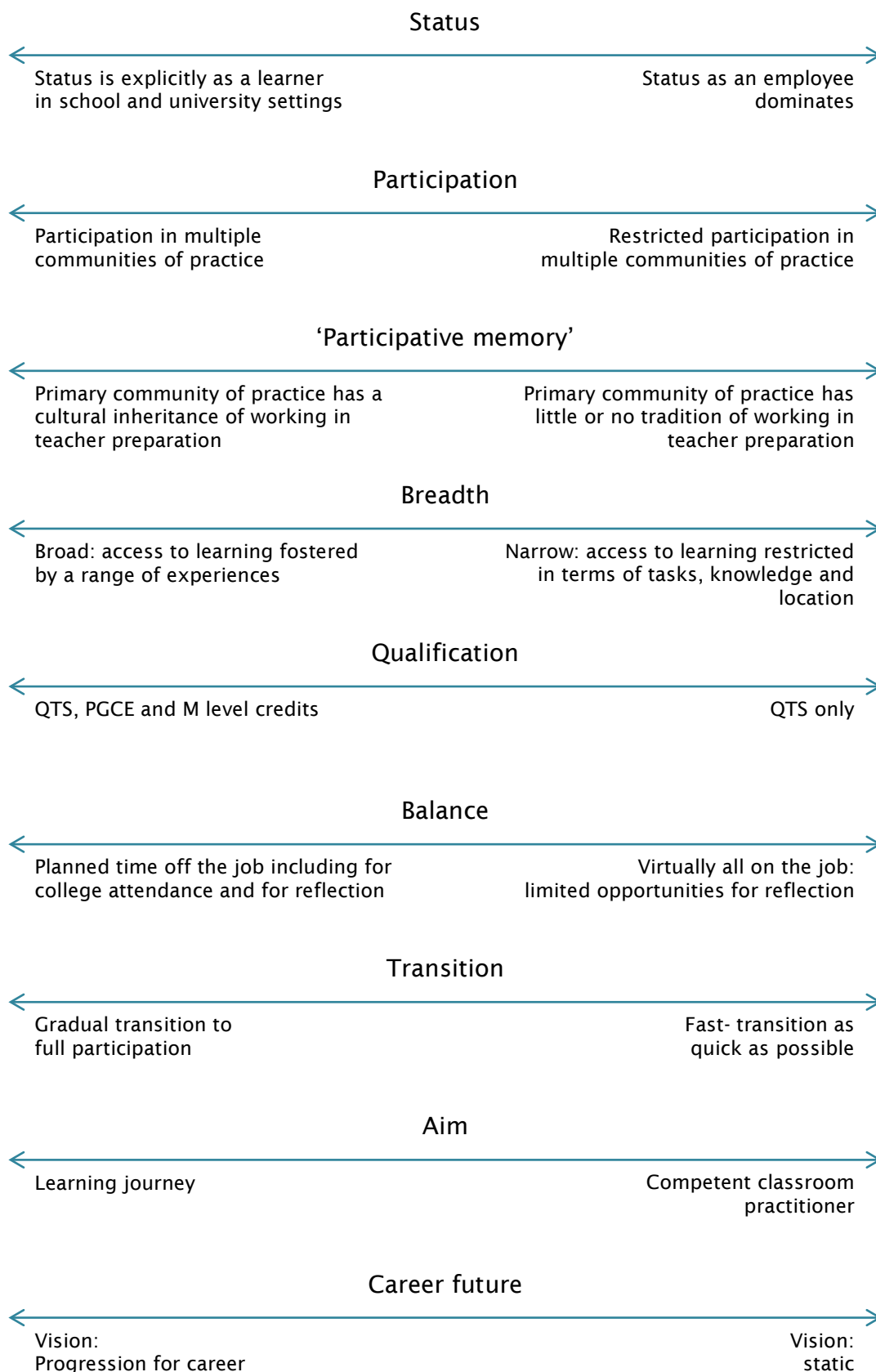
All three sources comment on the long-standing and continuing debate about theory and practice in teacher preparation, a theme returned to in section 2.62.5. Bernbaum et al. comment that “From the 1850s onwards there had been complaints about the lack of intellectual merit and liberal breadth in teacher training courses” (1985, p.7) and Sheldon discusses the findings of the James Report in 1972, *Teacher Education and Training*, asserting that it “criticised the teaching of theory in training colleges often at the expense of practical experience in school” (2011, p.4).

Appendix 2: A historical perspective on apprenticeship across professions

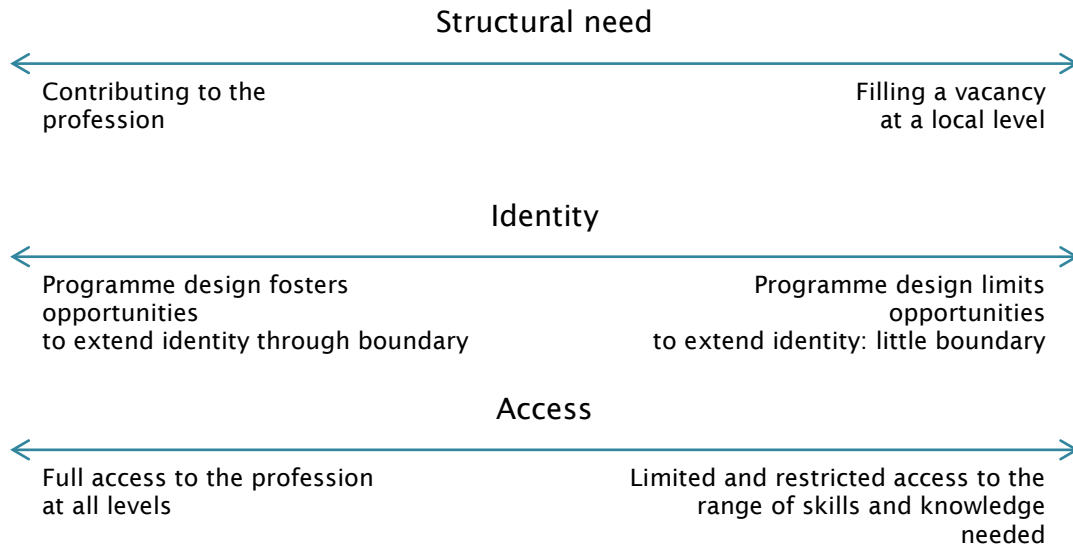
Hoskin and Anderson-Gough (2004) refer to teaching, law, medicine and the church as the 'so-called old professions'. They describe these as being developed and controlled by the graduates of the early universities. In the case of medicine, the universities limited access to the profession by limiting numbers and through the setting of entrance requirements (Chamberland 2013). These professions contain aspects of apprenticeship-type learning with the pupil in the law chamber, beginning clergy serving as curates and the long training and preparation system in medicine with residencies and junior supervised roles. However, it is notable that all three of these professions have an academic underpinning of study of at least undergraduate level in the discipline. However, in none of these professions is practical experience and training seen as a substitute for academic learning in the university. In fact, Dornan and Morke say that, whilst postgraduate medical education used to be an apprenticeship-type system with junior doctors learning from those more experienced in a manner they describe as "see one, do one, teach one" (2014, p.82), this is no longer the case.

In terms of learning a trade, Wallis and Minns (2012) say that the system in early modern England was complex, and that there was much diversity with regard to the actual outcomes and practice. Apprenticeship was about more than simply learning the trade; it was a part of the structure of society and a rite of passage, part of 'growing up', for apprentices. Hahn (2012) describes the similar system in France in the middle ages as a close intertwining of the social, cognitive and affective dimensions of learning. There was also a system of guilds and companies for the skilled professions in England and these had a significant role in their respective professions because they maintained exclusive control of all aspects of professional life (Chamberland 2013). Apprenticeship therefore has an important, and well-established role, in occupational learning.

Appendix 3: Adapted expansive/restrictive continuum



Appendices



Appendix 4: Ethics approval (self-efficacy survey)

Your Ethics Submission (Ethics ID:13515) has been reviewed and approved

Ergo [ergo@soton.ac.uk]

To: Hyde R.M.

17 February 2015 10:22

Submission Number: 13515

Submission Name: An investigation of the professional learning outcomes of school-led and more traditional Initial Teacher Training routes.

This is email is to let you know your submission was approved by the Ethics Committee.

Comments

1.Good luck with your research!

[Click here to view your submission](#)

ERGO : Ethics and Research Governance Online
<http://www.ergo.soton.ac.uk>

DO NOT REPLY TO THIS EMAIL

Appendix 5: Ethics approval (interviews)

Your Ethics Submission (Ethics ID:18015) has been reviewed and approved

ERGO [ergo@soton.ac.uk]



To: Hyde R.M.

15 January 2016 10:51

- You forwarded this message on 15/01/2016 14:32.

Submission Number: 18015

Submission Name: Effective professional learning in a work environment in teacher preparation

This is email is to let you know your submission was approved by the Ethics Committee.

You can begin your research unless you are still awaiting specific Health and Safety approval (e.g. for a Genetic or Biological Materials Risk Assessment)

Comments

1. Good luck with your project.

[Click here to view your submission](#)

ERGO : Ethics and Research Governance Online
<http://www.ergo.soton.ac.uk>

DO NOT REPLY TO THIS EMAIL

Appendix 6: Survey

An investigation of the professional learning outcomes of school-led and more traditional Initial Teacher Training routes

This research forms part of my work towards a PhD at the University of Southampton. I am interested in possible differences in outcomes between the new school-led routes to Initial Teacher Training, such as School Direct, and more traditional routes such as university-led PGCEs. The questions in my survey are designed to measure your self-efficacy; that is, your beliefs about your ability and capacity to accomplish common teaching tasks. Measuring self-efficacy of NQTs who have trained through different routes will help me understand more about the effectiveness of these different teacher training routes.

The survey is only for those who are Newly Qualified Teachers in secondary schools (defined as schools teaching at least school years 10 and 11) in England. It will ask you to confirm your eligibility for the survey, indicate the training route you followed for Initial Teacher Training, and to indicate your response on a scale of 1-9 to twelve questions. The survey should take no more than 10 minutes to complete.

All participants will be anonymous as I will not know who the survey has been sent to and the survey does not ask you to give any personal details or school identifiers. Hence, responses will be completely anonymous and all participants are unidentifiable. Schools will not know who has taken part and will not be able to access the data. I will comply with the Data Protection Act and University policy. All data collected via iSurvey is done via Secure Sockets Layer (SSL) which encrypts the data before sending it and storing it in the database. The database server itself is highly secure and the data will only be accessible to me and the results are password-protected. Once the survey has been completed and the database downloaded the information will be stored on a password protected computer and remain confidential. Your answers will only be used for this study and individual answers will not be shared with anyone. The data collected will be only used for academic purposes.

I consent to taking part in this survey. I understand that my responses are both anonymous and confidential and that, should I wish to, I can withdraw my participation at any time whilst answering the questionnaire without any follow-up communication from the researcher. I understand that my answers will only be used for this study and that answers will not be shared with anyone.

Section 1. General information

These questions ask you to confirm your eligibility to take part and to indicate the Initial Teacher Training route you undertook.

Question 1.1

I confirm that I am a Newly Qualified Teacher (NQT) teaching in a secondary school in England and therefore eligible to answer this survey.

- Yes
- No

Question 1.2

Please choose the option from below that best describes the Initial Teacher Training route you qualified through.

Appendices

- School Direct
- School Centred Initial Teacher Training (SCITT)
- University PGCE
- Teach First
- Other

Question 1.2b

Please describe your teacher training route.

Section 2. Self-efficacy questions

The questions ask you about your beliefs regarding your ability and capacity to accomplish common teaching tasks. The questionnaire is designed to give me a better understanding of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below.

Each question has a nine point scale for you to use to indicate how much you feel you can do about the issue in the statement. If you do not wish to answer a particular question please indicate this by ticking the 'prefer not to answer' column. *Please indicate one response for each line.*

Question 1.										
Please indicate your opinion about each of the statements below.										
	nothing 1	2	very little 3	4	some influence 5	6	quite a bit 7	8	a great deal 9	Prefer not to answer
How much can you do to control disruptive behaviour in the classroom?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you do to motivate children who show low interest in school work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you do to get students to believe they can do well in school work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you do to help your students to value learning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent can you craft good questions for your students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you do to get children to follow classroom rules?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you do to calm a student who is disruptive or noisy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well can you establish a classroom management system with each group of students?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you use a variety of assessment strategies?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent can you provide an alternative explanation or example when students are confused?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much can you assist families in helping their children do well in school?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How well can you implement alternative strategies in your classroom?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 7: Participant Information Sheet (survey)

Participant Information Sheet

Study Title An investigation of the professional learning outcomes of school-led and more traditional Initial Teacher Training routes

Researcher: Rosalyn Hyde **Ethics number:** 13515

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to confirm consent when participating in the online survey.

What is the research about?

This research forms part of my work towards a PhD at the University of Southampton. I am interested in possible differences in outcomes between the new school-led routes to Initial Teacher Training, such as School Direct and more traditional routes such as university-led PGCEs. The questions in my survey are designed to measure your self-efficacy; that is, your beliefs about your ability and capacity to accomplish common teaching tasks. Measuring self-efficacy for NQTs who have trained through different routes will help me understand more about the effectiveness of teachers trained through different teacher training routes.

Why have I been chosen?

I approached some of the lead schools of larger partnerships for school-led teacher training in England and asked them to pass my survey onto NQTs employed in their partner secondary schools. You have therefore been asked to participate in this research because you are an NQT working in one of these schools.

What will happen to me if I take part?

You are asked to complete a short online survey using the University of Southampton online survey tool, isurvey. The survey will ask you to confirm your eligibility for the survey, indicate the training route you followed for Initial Teacher Training, and to indicate your response on a scale of 1-9 to twelve questions your beliefs about your ability and capacity to accomplish common teaching tasks. The survey should take no more than 10 minutes to complete.

Are there any benefits in my taking part?

There has been relatively little research on teachers' self-efficacy in England. School-led routes to Initial Teacher Training, such as School Direct, have undergone very recent very rapid expansion and there has been a shift towards this sort of provision in preference to more traditional university-led PGCE courses. It is therefore important that we find out more about the differences and similarities between teachers who trained on different routes.

Are there any risks involved?

Appendices

Participation in the survey poses no risks other than those usually faced by when computer equipment for such purposes.

Will my participation be confidential?

All participants will be anonymous as I will not know who the survey has been sent to and the survey does not ask you to give any personal details or school identifiers. Schools will not know who has taken part and will not be able to access the data. I will comply with the Data Protection Act and University policy. All data collected via iSurvey is done via Secure Sockets Layer (SSL) which encrypts the data before sending it and storing it in the database. The database server itself is highly secure and the data will only be accessible to me as the results are password-protected.

Once the survey has been completed and the database downloaded the information will be stored on a password protected computer and remain confidential.

What happens if I change my mind?

At any time you will be able you will be able to exit the survey if you no longer wish to participate.

What happens if something goes wrong?

In the unlikely case that you have any concerns or complaints about this study, please contact the Head of Research Governance (02380 595058, rgoinfo@soton.ac.uk)

Where can I get more information?

If you have any comments or questions, please contact the researcher for this project: Ros Hyde, r.m.hyde@soton.ac.uk, tel no 02380599217

Appendix 8: Pen portraits and interview summaries

Teacher educator (pilot interview)

The first interviewee was a very experienced teacher who had moved into initial teacher education working in an HEI who are a very large provider of teacher preparation. She worked across a range of programmes including university-led and Teach First, and was self-selected as she offered to help with the study. She started her interview with the declared premise that situated learning is not a good model for teacher preparation. She felt that the distinction to be made was between supernumerary preparation and non-supernumerary preparation and was careful to qualify much of what she said by saying that there is good and poor practice in both university- and school- led preparation.

A theme throughout was that of the potential limitations for non-supernumerary pre-service teachers because they are committed to spending so much time teaching emphasising survival in the classroom. In her view learning and development are limited, or restricted, by the inevitable emphasis on one way of doing things with a lack of opportunities to explore alternatives. She emphasised the importance of identity and that of the importance of being in a learning-focused department (a 'professional learning community'), particularly as it is the collaborative aspects of learning and access to expertise that seem most at risk in the non-supernumerary model.

There was also a clear sense from the interview that it is 'the end product' that is contested – so she thought non-supernumerary preparation programmes produce confident and fluent classroom practitioners in their early years in the profession, but it was her view that their long-term development may be hindered by this preparation route. The interview identified a potential conflict between short-term aims in developing a competent practitioner to fill a teaching vacancy and long-term personal development of a highly qualified teacher. The key missing factor seemed, in her opinion, to be access to expertise in order to develop criticality, consider a range of alternative approaches and to link backwards and forwards between theory and practice in order to develop the ability to make informed decisions. She claimed that one difficulty facing non-supernumerary pre-service teachers is that of lack of space, time, opportunity and support for deep and informed reflection on practice.

Appendices

Elaine

Elaine was a mature female pre-service teacher with teenage children who was training to teach mathematics. She had a degree in mathematics and had previously worked as an actuary but had no recent particular school experience. She identified that the training she received in her Alliance was comprehensive and provided evidence against many of the aspects of learning through collaboration. She used 'collaborative' in a broad and under-defined sense but was clear to identify issues in her main placement school as having included a lack of working together on the part of the department. Her clear expectations on the part of her training were that it would include a high degree of supervision and assistance, with a good degree of access to expert teachers and opportunities for team teaming, supported planning and to receive feedback and advice particularly when trying out new skills. Whilst there were those she considered to be expert teachers in the department her access to their skills and knowledge had been very limited and her transition to the full role of the teacher was extremely quick. Her strong view was that the department did not, in practice, fit her criteria for a good learning environment and therefore should not 'be allowed' to have trainees. It is unclear as to whether she and the school had the same expectations of her role and the degree to which there was misunderstanding between them.

She identified peer support as a key need for herself as a trainee teacher but, despite identifying peers in a number of contexts, her overwhelming experience is one of isolation. A repeating theme was that, despite learning general pedagogic knowledge through the Alliance, she did not have sufficient opportunity to develop pedagogical content knowledge leaving her feeling that she has 'missed out' and with 'massive missing bits'. She also identified issues with the having necessary time and skill to reflect on her teaching.

The sense of being 'salaried' and therefore an employee of the school played a key role in her experience as she felt she needed to 'perform' and she now has a strong view that trainee teachers should not be salaried in schools because money 'complicates things'. The breakdown of her relationship with her mentor, a lack of mutual respect, school politics and lack of experience on the part of the department all played a role in the difficult experiences of her training year. Her hugely positive experience in her second placement school may have further added to her feelings of disappointment and frustration with

her main placement school. The consequences of her difficult experiences over her training year are longer term, and she was left with the sense (18 months post-qualification) that she was still impacted by this through a lack of confidence and unclear that she would be able to sustain her career as a teacher.

Her expectation had been that her teacher preparation would be a well-supported experience with frequent observations and feedback from an expert teacher who would act as her mentor. In her view, this is not what happened. She felt let down by her main placement school where the head of department who had interviewed her had left by the time she started her teacher preparation and the job she thought she had been offered for her NQT year did not materialise. She gained a part-time teaching post at her second placement at the end of her teacher preparation. She was supernumerary all year.

Philip

Philip was a young male teacher whose partner was undertaking teacher preparation as a primary teacher at the same time as he was training to be an English teacher. He had a degree in history and politics and had previously worked in the school he trained in as a year 11 progress mentor supporting pupils on the C/D borderline and also as a Learning Support Assistant. At one point in this period he had worked as an unqualified history teacher for a few months to help cover long term staff absence. He was therefore very familiar with the school prior to starting his teacher preparation, the school had asked him to apply to train with them. His experience was highly context-specific and he is offered employment at the school early on in his training year. He was very loyal to the school and his training Alliance, although he made a number of comments that could be considered to imply criticism of both. He saw his experience as that of 'real teaching', learnt by trying things out in the privacy of his own classroom.

The school made use of both his prior work experience and his salaried status by giving him the "attendance tutor group" and gave him a year eleven class when the class teacher goes on maternity leave. He was clearly used to responding to needs in the school and saw this as part of his responsibility, as well as affirmation of his ability.

Appendices

His second placement, whilst short, was described in terms that suggest it provoked a sense of disturbance in his development as a teacher. It was very short and curtailed by a rugby injury he incurred during that placement as well as a reluctance on the part of his main placement school to release him due to the exam classes he was teaching.

His training experience is very context-specific and he feels highly valued in the school, with a focus on what 'real teachers do'. He saw himself as having some natural attributes that made him suited to teaching. He identified that he would have benefitted from more opportunity for reflection in his training and for that reflection to have been at a deeper level. Whilst he clearly identified himself as a member of the school teaching staff during his training, looking back he appears to regret not making more effort to get to know those in the school on other training routes.

He was very confident and has a strong sense of his own competence – he said that he didn't find his training and NQT years particularly difficult. Whilst undertaking teacher preparation he was non-supernumerary all year and felt very much as if he was a full member of the teaching staff. He went on to hold a temporary internal promoted post in the school but failed to get the post on a permanent basis, but is ambitious for his future in teaching.

Paul

Paul is a mature career changer who trained to teach computer science. He had previously spent one term as a cover supervisor at another school to the one he trained in. His degree was in music and audio technology and so was a partial fit with computer science. He reported having difficulties all year with his subject content knowledge because the subject was so new in school and unfamiliar to those he was working with. He clearly saw his training year as employment. Being a "proper member of staff" and salaried was important to him; it legitimised him being in the school, but he remained 'different'.

His second placement experience allowed him the opportunity to be supernumerary and to gain a great deal of feedback on his teaching from the teacher whose classes he taught. There was some degree of difference in this level of mentoring and feedback compared with the lower level of engagement from his main placement mentor. When he started his training year he was mostly supernumerary but gained more independence as the year went on and

when a colleague left he became fully non-supernumerary for the last term. He gained a teaching post in the school he trained in and was rapidly promoted to head of department.

He found becoming a teacher an isolated experience at times as he had not relates particularly well with the other pre-service teacher in the school and had not made close relationships with pre-service teachers in other schools. For him, learning to teach was a challenge requiring resilience and determination. Managing behaviour was a key concern because his school is deemed 'challenging' and was "probably the most difficult thing to do".

Fiona

Fiona is a young woman who had previously worked for several years in a bank before deciding to retrain as an English teacher. She gained a job as a learning support assistant in the school she had attended as a teenager. The school approached her and asked her if she would do her teacher training through them and had employed her as a support assistant with this in mind. She went on to gain employment in her main placement school and is ambitious for her future as a teacher.

She felt very highly valued by the school and confident; a feeling that clearly started with her LSA interview experience and continued right through to subsequent employment at the school, becoming the mentor for new trainees in her department and the recognition accorded by the Headteacher in suggesting that their next pre-service teacher needed to be 'just like her'. The overall sense was of someone who felt successful during her training as she reported gaining good lesson observation grades and working independently. She felt that she had fitted well at the school and was reluctant to look for another post elsewhere in case 'the fit' was less good.

She was very complimentary about her training, although there are some implied criticisms. She admitted that she would have liked the opportunity to observe teachers in other subject areas; also that she would have liked more subject specific training. She also made guarded mention of difficulties with her mentor and changing mentor, at her request, part way through the programme. She further suggested that she had limited time for 'independent research' and 'extra CPD'.

Appendices

She gained a huge sense of support, including emotionally, and encouragement from those she worked with in her department, but also from the small group of pre-service teachers in her Alliance subject group within which she formed some close and enduring relationships.

Her experience was initially one of being supernumerary but she gradually gained more responsibility; she said that this was in response to both her progress and because of staffing issues in the school. She viewed herself as a teacher and when this was challenged by a parent her mentor resolved the issue by supporting her status as a teacher with the parent. Her second placement was a less comfortable experience because it disturbed her identity as a teacher when she felt forced into the role of 'trainee' and because she felt outside of the comfort zone her placement school had become.

Anna

Anna was a mature pre-service teacher with primary school-aged children who trained to become a mathematics teacher. Initially she had thought that she wanted to teach at primary level but after two weeks of primary school observation prior to applying for teacher preparation she changed her mind and chose secondary mathematics. Her sister is a secondary school mathematics teacher and was instrumental in Anna's decision to become a teacher. Anna taught fully non-supernumerary almost from the beginning of the school year. She was very independent and saw herself as capable and with relevant prior life experience. Her mentor largely saw to the administrative aspects of his responsibilities and seemed to have had little impact on developing her practice.

She struggled at times with aspects of her mathematics content knowledge because she felt she was 'rusty'. She referred to wanting a book like that used by Teach First which gave advice on teaching mathematics and she described learning how to teach mathematics as being a process of looking at what others had done, asking for advice and by "falling over it". She had a real desire to teach mathematics well and recognised that she needs support with how to do that because she had limited access to appropriate resources and to seeing different teaching approaches. Meeting with other pre-service teachers had made her question her mathematical ability and heightened a sense of

awareness that perhaps she had limitation in terms of her own subject content knowledge.

Her early experience saw her teaching from the third day of the school term and without her mentor in the classroom from the third week onwards. Her teaching was observed on a regular basis and her mode of learning was essentially to “give it a go” and see what happened. She said that not “being watched twenty-four seven” made the experience feel less stressful, even though she was “on her own”. She felt that there was advice available to her if she asked for it, but much of this type of support was instigated by her. She found the less experienced members of department more helpful as they could remember what it was like to be new and to struggle with behaviour management. She valued the support of another trainee in a different subject area “we sort of clung to each other, like each other’s lifelines”.

She saw herself as a teacher “because I’d had my own classes” and as an employee because she was “on her own” from early on and drew a salary. This was a dual identity as she felt she was a pre-service teacher when she went to university and when she was in her second placement. Being confident was a key theme and some of this, she claims, came from her previous life experience. She says that by the time she had her second placement, where she was fully supernumerary, she was ready to take some criticism and that a high level of support earlier on, or “mollycoddling”, might have made it more difficult to teach on her own later. She acknowledged she learnt a great deal from this supported experience she has in her second placement (i.e. the mollycoddling) “but couldn’t have taken it for more than six weeks”.

She had a strong sense of belonging in her main placement school and a sense of part of the school- i.e. not a “visitor” or “a trainee popping in for a little bit”. She felt that she was able to contribute the school and wasn’t somehow taking anything away, or draining resources.

There were indications that she sees the formal lesson observations as requiring her to demonstrate performance and therefore she tried things out beforehand with a different class. She viewed formally observed lessons as being “completely examined under a microscope” and that with unobserved lessons it was possible to hide if things didn’t go well “kept a brave face on”.

Appendices

She felt well-prepared for her first teaching post as she had carried the range of duties of a teacher in her training and felt that otherwise there would have been a 'big jump' to being an NQT. Her early career in teaching saw her stay at the school she trained at for one year, then move to another school before planning another move to the independent school at which her sister was already teaching. She seemed to feel a bit guilty about moving into the independent sector and justified the move in terms of her family situation and some of the issues she has at her current school.

Pamela

Pamela was a recent graduate who only just met the work requirements for the employment-led route. She some prior school experience through a module on her undergraduate degree and a year working as a learning support assistant at another school. She trained as a history teacher and taught some Religious Education and some geography in her training year. She was initially supernumerary in school but during the latter part of the year did some cover supervisor work. She felt this worked well for both her and the school in that she had already established herself in the school as a subject teacher before starting as a cover supervisor but it also meant she learnt to think on her feet and got her out of her 'comfort zone'. Her introduction to teaching was gradual with observation initially before picking up one class in a supported way and then other classes later. She described her experience several times as being 'submerged' in the school.

She described herself as learning to teach through observing others, followed sometimes by imitation, and as having workrf closely with the head of department, who was not her mentor. She found the head of department more supportive than her mentor, in part she felt because her allocated mentor had other responsibilities in school. She justified the difficult relationship in these terms and in saying that there was a "little bit of difference in personalities" so her mentor hadn't appreciated her approach to teaching. Later, she gave further indication of the difficulties with her mentor in that she was being told what was wrong but not being given advice about how to put it right, and also that she was being given advice to follow, following it and then being told she'd done things wrong. She identified gaining sufficient confidence to make the relationship work and seek the support she needed as important in her learning. Some of her difficulty with her mentor seemed to have revolve round

her strong sense of self and who she wanted to be as a teacher and being unable to connect this with the advice from her mentor.

She had appreciated the support of other trainee teachers in her alliance, some of whom she has stayed in touch with, and the way they worked together because it helped her to try new things and become “more adventurous”.

She raised some issues about pedagogical content knowledge suggesting that having to teach Religious Education and geography had the potential to detract from learning to teach as a history specialist and that she would have liked more about the teaching of history in her university sessions.

She described needing determination in order to succeed because she says ‘you’re not very good when you start’ and that was easy to focus on the negatives. In such situations she said her peers and her tutors were critical support. She felt like an employee, but one in training, and described feeling that she was accountable to school managers for aspects of her work. She felt a strong sense of responsibility to learners, and of professionalism, focused on becoming a teacher.

Following her training experience there was no job available in her training school, which is what she would have liked and had thought was part of the scheme, so she gained a teaching post in another school. She saw that this had given her the opportunity for a fresh start although also that she would have liked to have continued to work with the same groups of children as she’d trained with. She has since also taken a further training course to develop as an English teacher, and now teaches English, history and media in her current post. She has found this too demanding and was seeking to address this issue for the future with the senior management.

Sally

Sally was a mature single mother of five children who had previously been employed as a teaching assistant for ten months in the school, mainly working in an exclusion unit on site, she started training in initially. Her aim in becoming a teacher was to secure financial security for herself and her children. Her degree was in International Relations and she realised she was ‘lucky’ to have been offered the opportunity to train to be a history teacher. However, her lack of subject content knowledge caused her problems for most

Appendices

of her teacher preparation year. She started her teacher preparation working as a non-supernumerary pre-service teacher with a heavy teaching load. When the school were unwilling to adjust this to make things more manageable she 'resigned' (in her words) and her training alliance found her a fully supernumerary post at another school. Having to 'start again' seemed to have had the effect of meaning that she felt 'behind' for the remainder of the year and that there was an early point where she 'missed out' on some training.

However, she had a difficult relationship with her mentor in the new school. She found the rest of the department, who had a range of teaching experience and share a staff room, as supportive, both personally and professionally. Her induction into teaching was more gradual. She received a great deal of feedback on her teaching but this, at times, became 'too much' because she felt she is getting more feedback than she had time to act on.

She described herself as having struggled with her content knowledge and planning in particular with her mentor deciding part way through the year that the solution to her difficulties was for her to plan her lessons from scratch. Unfortunately, this didn't help and it was not until late on in her training that the problem was identified as her lack of understanding of the skills element to history as well as the factual element. Much of her training was generic and this had neither identified nor supported her with her content knowledge. Despite her recognition that subject knowledge was a problem, she seemed to have a lack of specific understanding as regards pedagogical content knowledge and difficulty articulating this any further than recognising that skills needed to be taught as well as 'knowledge'. She was unsure how she developed pedagogical content knowledge and said that it was perhaps through observation and repetition, saying that she was not able to be explicit about how she did those sorts of skills.

She seemed to have no expectation of either wanting or expecting a teaching post at her training school as she described the mentor relationship as temporary. The second part of her training year was coloured by her difficulties in getting a teaching post for her NQT year. Her lack of relevant degree became an issue when she applies for a job, so getting on the course was not her only hurdle with regard to subject knowledge. She saw others getting jobs

and applied herself, she was very aware that she might not gain employment at the end of this, and did not get a job until almost the end of the year.

Her expectations in her original school were that she would have more time to observe others and get more feedback from others about her own teaching. She did receive mentoring and generic teaching. Her first experience was that of being an employee in training and her second was more training whilst an employee, and she did identify herself as belonging to the departmental team. For her classes she was seen as the main class teacher, and importantly to her felt that pupils did not view her 'as a trainee', but her account is that of being in training as a teacher.

Her story is of an incredibly difficult year where she struggled with many things in many ways. She found her training experience challenged her own sense of having an identity as being highly capable and that she was pushed many times to 'breaking point'. She said that she had spent much of the year upset and in tears, feeling that the workload was "so heavy, constant heavy workload". Despite this, she was successfully employed as a teacher and really enjoyed her job and has secured her own future and that of her children.

Claire

Claire was a recent graduate who had previously worked as a school administrator, on summer camps abroad and as a language assistant. She had been expected to spend two weeks in school in the June prior to her teacher training but felt that this was of limited value. She trained to be a French teacher with Spanish as her second language.

She was supernumerary and very much the junior member of the department, from whom she is happy to receive advice and follow their lead. She was very positive about the support she received from her mentor and the head of department and the relationship was very much her receiving feedback and advice from those with much more experience. She found her experience supportive including with regard to her Spanish with which she was less confident. The department was fairly traditional in its approach and it was her time at university that offered the opportunity to learn about new approaches. The new ideas were something she was able to offer the department back in return for their support.

Appendices

Being salaried seemed to mean she felt that the school had a right to expect more from her than they would from a non-salaried pre-service teacher and that this way why they left her on her own in the classroom later on in the year. She also suggested that this was the reason that she often took the tutor group on her own. Being salaried made her feel more valued.

Her second placement felt as if it had disrupted her experience, particularly as that school had been undergoing a certain amount of change and was in a degree of difficulty at the time. She now works as a local free school as a languages teacher.

In part, she viewed her learning as imitative in that she felt she needed to do things herself in order to learn and she also described copying the teachers she observed and also following the routines that they advised rather than developing her own. She made little reference to content knowledge needed other than to say that she was always able to ask for help with her Spanish. She viewed her pedagogical content knowledge as being learnt at university because of what she saw as limitations on the time teachers had available to do this and because tutors were more skilled at this aspect.

The sense in which she felt that she belonged in the school and of mutual investment in one another were important to her. Being seen as the class teacher by parents was something she saw as a benefit of having been in school for the whole year. She taught a good range of classes at Key stage four and helped out with A level but her experience at Key Stage Four was limited to helping out and team teaching and she found this to be a limitation later on.

She valued the support of the small group of pre-service teachers in school who were able to help each other out. This group was important to her and she missed them when they all went on second placement at different schools. She has remained in contact with two of the five and a third works at the same school as her. She valued the time in university for similar reasons.

Her experience of the second placement was that it felt like it disrupted her experience, especially as that school was in a degree of difficulty at the time and she found it difficult because she wasn't with the same small group of pre-service teachers. She says that she was supported, but not to the extent she was in her main placement, and went on to accord it some limited value in a

different experience and because it made her value the communal aspects of her main placement. She admitted that she did not get as much out of the experience as she now wishes she had, partly because she wanted to get back to the familiarity of her main placement.

Marie

Marie now teaches in the school she trained at. She is a mature trainee with a primary school age child who had a previous career in industry, finishing up as a consultant. When managing her consultancy round school hours became an issue she started to look at other options. She had very little experience in schools prior to teacher preparation. She saw her previous experience as having given her a broader perspective on education and its value. She said that she wanted to do an employment-led route because she wanted to learn by doing rather than sitting passively or reading a theory.

Marie trained as a physics teacher and started off supernumerary but the year went on that changed, and as there was long term staff absence she filled a vacancy in the summer term. Her early experience was with an experienced teacher giving her feedback.

She was very positive about the support she received both from her mentor and from other teachers she worked with. Her approach to becoming a teacher was to see it as a consultancy project and as a job or a business to learn and to do to the best of her ability. She felt that she was part of the team and certainly not an 'outsider'. For her, the notion of 'being an employee' wasn't necessarily positive, so she said she felt like she was looked after as an employee but retained a sense of doing things 'on her terms'.

She valued her second placement because it was different in many ways and she was able to see another way of doing things. She spent four weeks there but wished it had been a little longer. This placement was important to her because she saw different things.

Marie was very organised and allocated one day a week to training activities either at university or of her own devising. She also suggested that she took the lead in driving the placement. She valued the university input in developing her content knowledge in science and building her confidence with aspects of content where she is less familiar in biology and chemistry. She also received

Appendices

considerable support regarding content knowledge, interspersed with practical advice and a degree of pedagogical content knowledge, from her mentor and conscientiously worked through her subject knowledge audit and support materials. She also attributed learning content and pedagogical content knowledge at university, through assignment reading, and observing other teachers, but described this in practical terms of hints and tips but is reflective regarding the need for depth of content knowledge and for something that went beyond this type of knowledge.

Stu

Stu had some experience prior to starting his teacher preartion programme through weekly visits to a school for a few months whilst he was an undergraduate and as an assistant English teacher in Japan. He trained to be a biology teacher. Both his main and second placements were schools he had attended as a pupil and he described them as similar. His experience in school in the first term and a half was supernumerary but by then someone had left and he moved to covering the vacancy. He also had a small number of additional duties due to being salaried.

He valued the opportunity to meet with other trainees in similar situations as a learning experience as well as observing others teaching. He described drawing on a range of colleagues for advice and to help his learning. He was particularly drawn to newer colleagues, who he felt had a better understanding of the demands on inexperienced staff, rather than senior managers. He was critical of senior staff and suggested that they are a bit out of touch and that they were not subject to the same expectations and pressure as less experienced teachers. He felt that being in schools was far more of a learning experience than being at university.

He valued feeling like part of the team in school and being in the same place for the whole year so that he could build relationships with colleagues and get to know the school systems. He valued the camaraderie he had with other teachers and other pre-service teacher, although initially the latter had been somewhat competitive in nature. Being in one place for the whole year had helped him to feel like an employee rather than a 'trainee'.

By his own admission, his focus was on his own teaching and on his own department rather than gaining a broad understanding of the school and

taking up a range of opportunities. He had a view that he needed to work out what worked for him because there was an individualised aspect to being a teacher and he had a strong sense that teachers know what they can do well and can make choices to develop their weaknesses incrementally. His view was that he needed to do some teaching and planning for six months first, because at the start he knew so little, and then later he'd have been in a better position to make use of training. His mentor took a back seat in his lessons with a hands-off approach which he later felt allowed him to learn by making his own mistakes.

He had a lot of support from his head of department, and his mentor, with his pedagogical content knowledge in terms of identifying key ideas. He recognised his need to develop his own content knowledge, both in physics and chemistry, with which he was less familiar, but also in biology to identify the key ideas. For him there are affective and emotional aspects to learning to teach and he was challenged personally, particularly in terms of not being able to be perfect and 'successful' all the time.

Jack

Prior to starting his training to become an English teacher James had worked in schools for about three years in roles as a teaching assistant but not in the school he trained in. He had previously worked as a cover supervisor, intervention and unqualified teacher. For part of the whole year he was non-supernumerary and his timetable changed part way through the year when a member of staff left and he ended up mostly teaching bottom sets.

He had a supportive small group of pre-service teachers within his Alliance and found a couple of NQT colleagues in school who were particularly supportive, although he felt that staff were approachable and helpful. He felt the department were supportive and inclusive and even moved their lunchtime informal gathering to a different day so he was in school and could join them.

He felt he had insufficient support from his curriculum mentor throughout the year, which wasn't helped by her having a senior role in the school and therefore many other demands on her time. She was active mentoring him through the first term, when he was struggling, then she was much less available but he wasn't clear whether she expected him to manage independently or no longer had the time available. However, he had one of the

Appendices

professional mentor's classes and he effectively stepped into the role. Some of the training he received through his Alliance was of poor quality but he felt that his main placement provided him with lots of opportunities and that he could take initiative in finding his own support and had different people he went to for different things. Because part of his timetable was vacancy-filling he found he needed to be proactive in seeking advice and support with these classes.

He found his second placement invaluable and wished it had been a bit longer. He felt that it had come at the right time as things were beginning to improve and it had given him the opportunity to work in a different environment and with different systems which was good preparation for his NQT year as he had gained employment in a new school in a different area.

Towards the end of the first term Jack faced a particularly challenging time, both personally and professionally and felt that he might not have been able to complete the programme. He felt that the school were expecting too much from him in specific ways, some staff were making judgements about him and also expecting him to pick things up very quickly because of his previous experience. He was grateful to his university tutor for helping him to see that the school also held some responsibility for some of the difficulties he was having. He acknowledged that he made things more challenging for himself by moving to a new area to train but recognised that this experience made him a better teacher.

He said that he developed his content knowledge through reading and through speaking to others and that his pedagogical content knowledge had developed in the same way and through talking to his university tutor. Having worked in school previously he felt that had helped his subject knowledge as well.

Kate

Kate is a mature trainee who has previously worked as an LSA in a school with SEN pupils who trained as a geography teacher. She is now employed in the school where she did her second placement. She said that she needed to take the salaried route because her husband is not able to work so she is the family breadwinner. She viewed being a mature trainee as beneficial saying that she had skills she could transfer to the classroom. Initially, she was supernumerary and she said the original intention was that this would be the case throughout

her training. However, after Christmas a teacher went on long term sick leave and she took on this person's timetable for both geography and history for the remainder of the year. She therefore had a lot of support in the classroom in her first term as supernumerary but was then left to her own devices after Christmas, which she liked.

She said that she spent a lot of time watching other teachers and was then able to ask them questions afterwards, as well as team teaching and collaborative planning, particularly for history and Religious Education. She described hitting a problem at Christmas when her lessons included good activities but they weren't going very well. Her overall experience is one she described as having been superbly supported in a very, very good department with access to a high degree of expertise. She talked a lot about the level of support she had from the departments she worked in and the school more generally.

She felt she started with a good level of subject knowledge in some areas, and that this is still the case. If she feels she has insufficient she will read a textbook, or speak to her head of department, or read the subject association magazine. She felt she learnt her pedagogical content knowledge from watching people like her mentor teach lower sets. She said that she naturally picks up misconceptions and that she liked to try and use images that make sense to pupils. She also thought that it was listening to other teachers and borrowing their ideas that developed her pedagogical content knowledge.

She said she tried to act as a member of staff and take part in school life in that way and felt that she was treated in that way by the department. What she said, though, implies a recognition of her training status when she talked about being 'allowed' to do things. She seemed to gain her status from being part of the team and a full member of staff and, whilst part of the pre-service teacher group in school, did not seem close to other trainees, who she describes as having had a considerably more stressful experience than she did. She put that partly down to being a mature trainee but also the strength and support of the departments she worked in.

She admitted that going on her second placement was difficult as it felt almost like going backwards and she had to start building relationships again. At that point, she would have preferred not having to have to go. However, it was a valuable experience.

Appendices

Harry

Harry is an ex-Army infantry officer who had little school experience prior to starting his teacher preparation in Computer Science. He said that his school placement was 80% non-supernumerary from his second week in teaching computer science, information technology and business communication systems. He felt this was problematic because he felt he wasn't learning as he was making it up as he went along so he spoke to his Professional Mentor, who then arranged for him to have other staff observe him and reduced his teaching load for a time. He suggested that he felt that they were expecting him to be a teacher without providing any training or support. He described envying those pre-service teachers who were supernumerary who he thought had opportunities to watch a lesson being taught and then to teach that lesson themselves. He felt that asking for informal observations or additional support made him feel bad because he knew how busy everyone was. He said that the school treated him as if he was a fully-fledged teacher, and that they liked having him around because he took workload off others. Hence, when he had his timetable reduced early on there was pressure on him to take back the workload as soon as possible. He felt that the department culture was that having a pre-service teacher meant less work for the regular teachers so they had time to do other parts of their job. He recognised that having the status of a teacher in the school had benefits but also increased his stress levels.

His degree was in computer games design but with little programming experience so his expectation was that he would be taught the computer science content knowledge that he knew he didn't have at the beginning of the year with a gradual introduction to teaching whilst being supernumerary.

There was no expertise in his school in computer science so he ended up feeling that he was expected to be the subject expert and that he was teaching the teachers. He said he tried to learn some things before he started the course from a textbook whilst in Afghanistan so he learnt his content knowledge whilst teaching by reading books and trying to stay ahead of the pupils. Pedagogical content knowledge, he said, was taught to him and then learnt by trying things out and seeing what worked well.

His experience in his second placement was as again as the computer science expert, but with the support of a senior teacher. He said that his main

placement only wanted him to do ten days second placement and that he had to fight to get half a term because his view was that ten days would not have benefitted his learning.

He valued the opportunities he had to be part of a group of pre-service teachers and felt that he learnt a lot from working with them. He felt the training he received in school was very useful because he could directly relate it to his classroom experiences. He said little about his mentor, describing working collaboratively on content knowledge but also that the mentor needed to be the best in the department with the implication that his was not. He said that he was selective about which teachers he chose to observe, feeling that he needed to watch those who had a similar teaching style to his own. Watching those who were different to himself he felt was a waste of time. He was also disappointed by the support and training provided by his university tutor, who he felt could usefully have spent his teaching time going through the syllabus with them.

He felt that he was under pressure to volunteer to do extra things in his training year and that he would rather have focused on his content knowledge and teaching. He described the experience as being incredibly stressful, extremely tough and as being miserable at times, and suggested also that there was some camaraderie with other pre-service teachers in that misery. The camaraderie was really important to him.

He found aspects of being a teacher difficult. Whilst his Army background meant he enjoyed and values the camaraderie he felt that some teachers did not measure up to the professional standards he expected. He described his previous experience as an Army officer as having given him the ability to deal with stress, to perform under pressure and to make decisions on the spot (to 'wing it').

His experiences turned out not to be as he had anticipated. Instead of a year of training during which he was supernumerary, he felt he found himself teaching himself how to be a teacher, that it was a practical rather than educational year and far harder than he had anticipated. Despite being offered teaching posts at both his placement schools he chose not to go into teaching and is now running his own business.

Appendix 9: Code descriptors

Broad theme	Codes	
Theory and practice	Understanding of teacher knowledge	Indications from the teachers about their view of knowledge for teaching – craft, technician etc. these were used to write the little pen portraits about the teachers' models of learning
	Content knowledge	The term content knowledge refers to the body of knowledge and information that teachers teach and that students are expected to learn in a given subject or content area, such as English language arts, mathematics, science, or social studies. Content knowledge generally refers to the facts, concepts, theories, and principles that are taught and learned in specific academic courses, rather than to related skills.
	Location of learning	References by interviewees as to the physical locations where their learning took place
	pedagogical content knowledge	The “most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations — in a word, the most useful ways of representing and formulating the subject that make it comprehensible to others” (Shulman 1986, p.9). Also “includes an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that students of different ages have”(Shulman 1986, p.9).
Workplace	Belonging	References made to feeling part of the school staff, of being part of a team, group or department
	Collegial support	Instances where the support of other pre-service teachers within school or

Appendices

		within the programme was mentioned, along with references to support from other teachers in their placement schools
	Conflict between routes	This code was used to collect references to other teacher preparation routes focusing on perceived features and differences between them.
	Employment	Comments made about being employed, being an employee of the school, being on a salaried programme, what was distinctive about that experience in their eyes. Includes comments about being non-supernumerary, perceptions about the impact of their employment status in school.
	Isolation	Those references interviewees made to feeling isolated or along
	Previous workplace experience	Instances where interviewees commented on their previous employment in terms of its impact on their experience and understanding of their teacher preparation
	Loyalty	Evidence of the teacher's loyalty to their placement school, for example, positive remarks but some implied, partial or unacknowledged criticism, or qualified criticism of their placement
	Relationship with management	References to senior management or school leadership, including those relating to unwarranted (in their eyes) high expectations of their performance. Sometimes implicit in the use of 'they'.
	Trainee role	Explicit references to themselves as a 'trainee' or feeling like a trainee. Also implicit references to being in that position.

	Treated like a teacher	References to being treated in a 'teacher-like' manner by others, for example in terms of what they were asked to do in the school, how others regarded them, having the responsibilities of a teacher and how they regarded themselves. Includes references to non-supernumerary experiences.
Mentoring	Mentoring	Includes specific references to the mentor as well as to those parts of teacher preparation that are the responsibility of the mentor, such as lesson observation, target setting, support and assistance. References to the professional mentor, who is also a teacher at the placement school, are included but mentor of those employed by the university are not, as the code reflects the mentoring as it is enacted in the school environment
	Feedback	Includes specific references to observations of the pre-service teacher's teaching and the feedback given to them subsequently. It is not concerned with the pre-service teacher's observation of the teaching of others

Appendix 10: Participant Information Sheet and consent form (interviews)

Participant Information Sheet

Study Title: Effective professional learning in a work environment in teacher preparation

Researcher: Rosalyn Hyde

Ethics number: 18015

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

This research forms part of my work towards a PhD at the University of Southampton. I am interested in finding out about the learning of trainee teachers on School Direct programmes in English secondary schools. In the study I will be interviewing a range of people about their views and experiences of School Direct.

I hope that the interviews will help us to understand more about how trainee teachers learn in a school environment and how to support that learning more effectively.

Why have I been chosen?

I am interviewing a range of people who have had different levels and types of involvement with School Direct. You have been chosen because I think you can help me with this research by sharing your understanding and experience.

What is involved in taking part?

I would like to interview you. You will be offered the choice of a face-to-face interview, and interview by telephone or using Skype. The interview will be arranged at your convenience and will last no longer than one hour. You will be asked questions about your experiences and understanding of School Direct as a training route for teachers.

Are there any benefits in my taking part?

You will be helping us understand more about initial teacher training on the School Direct route and we hope this will help with better programme design for future trainees.

Are there any risks involved?

Participation in the interview poses very little risk as you will be choosing the mode and place for the interview.

Will my participation be confidential?

I will be audio-recording the interview, but this material will only be available to myself and my supervisors. No information about you will be shared with anyone else. All interview material will be stored on a password protected computer in compliance with the Data Protection Act and University of Southampton policy and remain confidential. Every effort will be made to protect your identity at all stages, including in reports and any publications stemming from the research, and any potentially identifying details will be changed.

What happens if I change my mind?

You will be asked to give written consent before the interview and I will also ask you to give verbal consent at the beginning of the interview. You can withdraw from the project at any stage and I will not use your interview data up to the point of writing and publication (approximately 12 months after your interview).

What happens if something goes wrong?

In the unlikely case that you have any concerns or complaints about this study, please contact the Head of Research Governance (02380 595058, rgoinfo@soton.ac.uk).

Where can I get more information?

Appendices

If you have any comments or questions, please contact the researcher for this project: Ros Hyde, r.m.hyde@soton.ac.uk, tel no 02380599217

CONSENT FORM

Study title: Effective professional learning in a work environment in teacher preparation

Researcher name: Rosalyn Hyde

Ethics reference: 18015

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (version 3 17/12/15) and have had the opportunity to ask questions about the study.

I agree to take part in this research project and agree for my data to be audio recorded and used for the purpose of this study

I understand that my responses will be anonymised in reports of the research

I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study.

Name of participant (print name).....

Signature of participant.....

Date.....

Appendix 11: Interview schedule

Recording and permission statement – assurance of anonymity and opportunity to check transcript.

I have read and understood the information sheet (version 1 3/12/15) and have had the opportunity to ask questions about the study.

I agree to take part in this research project and agree for my data to be audio recorded and used for the purpose of this study

I understand that my responses will be anonymised in reports of the research

I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected

Basic information: For the record, please can you state your job title and role.

Introduction

I'd like to talk with you about your experiences and understanding of school-led routes, such as School Direct, as models of teacher training. The diagram shows some of the factors and processes that are part of *situated learning*, which is the theoretical model underpinning apprenticeship learning. These questions are designed to explore with you the degree to which situated learning and apprenticeship can be used to understand school-led routes, such as School Direct, as models of teacher training.

The idea is that there are four types of learning that take place through authentic activity, context and culture. The learning for a trainee teacher is of two kinds in situated learning, which I've called *learning through collaboration* and *participating in teaching*. The first is about how trainee teachers learn from others about teaching and being a teacher and the second is more focused on how they learn to teach through participating in classrooms.

Please try to use specific examples to illustrate your answers and explain which training route you are referring to.

1. An important feature of situated learning is learning collaboratively. Please use the words on the diagram to help you with your answers if you wish.

Appendices

In what ways do you think that trainees on school-led routes learn from working with others in the school setting?

What examples can you give of this?

What groups are they part of that facilitate their learning in becoming a teacher?

Can you give any examples where trainees on school-led routes have not sufficient opportunity to learn in this way? What factors meant this learning could not take place?

2. The other important feature of situated learning is learning through participating. Please use the words on the diagram to help you with your answers if you wish.

In what ways is participating in the school setting beneficial to the learning of trainees on school-led routes?

Can you give any examples?

3. What do you think the school setting provides that develops the learning of trainees on school-led routes?

Can you give examples of school-led training experiences and opportunities that led to trainee learning?

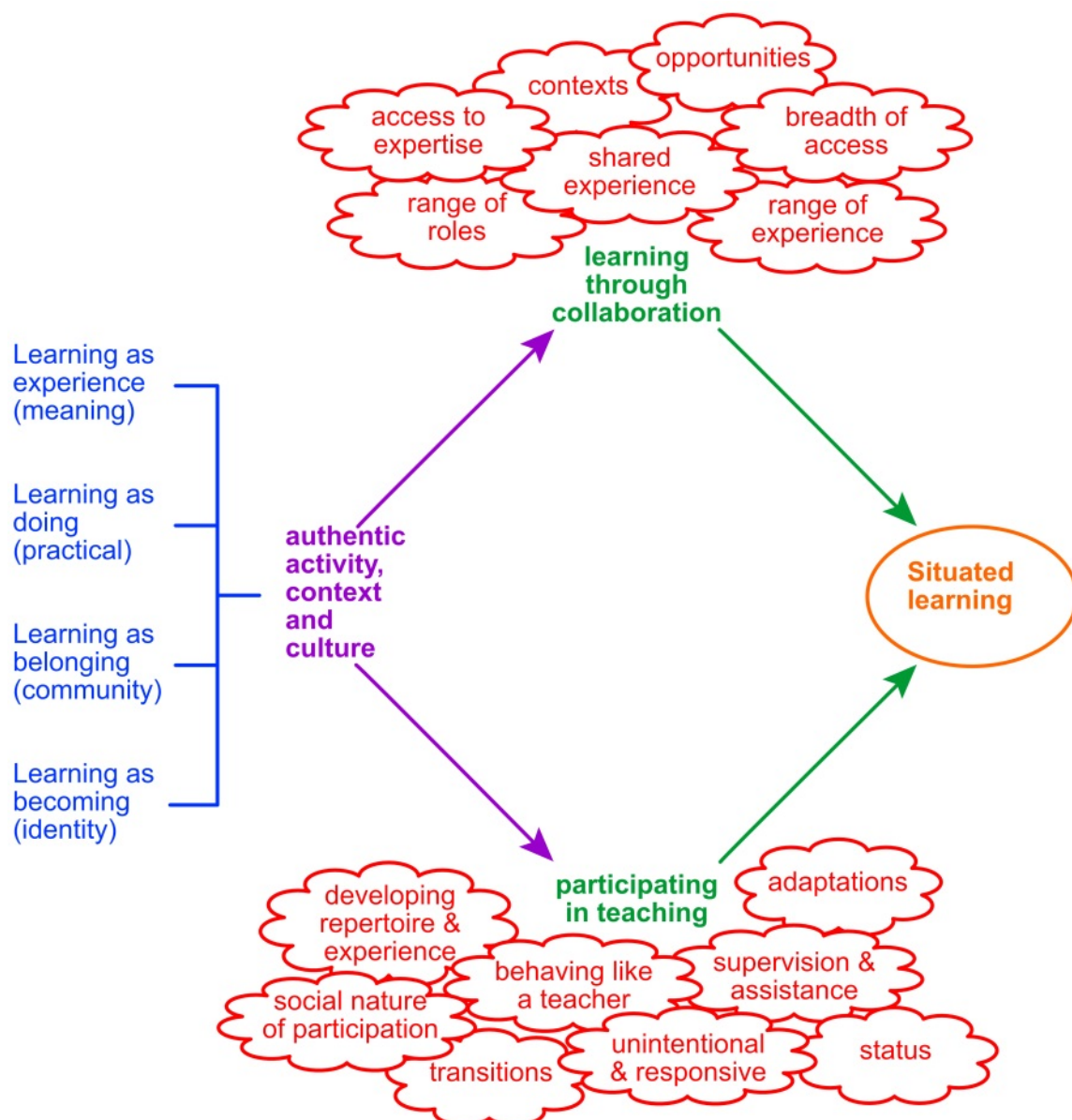
How is it, do you think, that trainees develop an identity as a teacher in the school setting?

4. Are there aspects of school-led route that don't work so well for teacher training?

Can you give any examples of aspects of becoming a teacher that trainees can't, or find it difficult to, develop and learn in a school setting?

5. To what extent do you think that teacher training can be considered as apprenticeship?

Thank you for your help and giving up your time to do so.



Additional interview prompts (identified following pilot):

Contexts – across different schools and settings, year groups and attainment

Opportunities – to engage with other groups inside and outside school, to experience different aspects of school life, were there opportunities you think you didn't get that you would have liked?

Access to expertise – who was it who was in the role of expert? Was there more than one?

Range of roles – did you learn about the range of roles of a teacher? How?

Shared experience – was learning to be a teacher an isolated experience for you? Or were there others you felt shared your experiences? How did this take

Appendices

place? Did other more experienced teachers share their experiences with you in order to help your learning?

Breadth of access – Did you have the opportunity to learn different ways of doing things, to challenge, to try out things? Were you provided with the learning experiences you needed?

Range of experience – within school and more widely. Different classes, etc.

Status – did you feel like you were a teacher or a trainee? Or both? At different times?

Supervision and assistance – Who provided this? How? Structure?

Adaptations – were any adaptations made to your teaching timetable at any point? For example, by changing your classes?

Behaving like a teacher – how did you learn this do you think?

Transitions – were you eased gradually into teaching? Or started teaching quickly?

Social nature of participation – to what degree were you part of the team? Did you learn from, alongside or with the team?

Developing repertoire and experience – how did you develop this? Did you have sufficient opportunity to develop your repertoire? To try things? Repeat things? To develop your own routines? Opportunities to observe the practice of others? To practice with part of the teacher role first? E.g. team teaching, taking a starter,...

Unintentional and responsive - what opportunities were made to provide learning in response to identified needs or as needed on an ad-hoc basis?

Appendix 12: Transcript excerpts

Excerpt from Philip's interview:

....you've talked a little bit about being salaried and having worked here before and the different sense in your role, of belonging as part of the English department and feeling quite different to those on the university-led PGCE. So did you feel like a teacher or a trainee, do you think, most of the year, or did that vary?

I definitely felt like I was more of a teacher, definitely. It was strange when I went...because my second placement was at [name]... I didn't feel that same ...sort of ...the same ...togetherness and the same kind of ...I felt a lot more like a trainee, I felt a lot less experienced,... and I found myself making, really, the kind of mistakes that I'd never, doing the things you'd never do for your own classes...finding yourself picking up on like behaviour that is so low level and taking it way out of....taking it all....I trying to say don't take it all too seriously, you know,...obviously you'd take it seriously if

Knowing what to leave and what to follow up on

Exactly, yeah. Yeah,I found it all....the kind of savviness that you have....I felt god, god, please never leave. And I felt...It was a really strange experience kind of like that

Do you think that was being in a different environment?

Maybe, maybe I was a bit institutionalised here

Maybe it out of your comfort zone?

Yes, definitely yes. Like I said I felt like that I had regressed a lot, just from that. So there was, definitely I felt like more of a teacher here. Here I felt "ah it's fine" I've seen it all before, I know what's coming, there's definitely the familiarity, I definitely felt like that beforehand, more a teacher and I felt like more of a trainee at [name]. It's strange isn't it?

Excerpt from Anna's interview:

Yes, yes...you've talked about people being willing to answer questions when you asked them and to help you if you took the initiative ...Did you feel that you did have the access to the expertise you needed?

I think so, yes, the math department worked very well together, they were very supportive of each other and quite often... I mean, we'd plan schemes of work together, we'd share the resources that we all had, so yes, and certainly were open to working together when time permitted, I guess

Do you think, for you, learning to become a teacher was an isolating experience?

I think, because I'd transitioned so late in life and because I'd done other things where there was quite a bit of training and quite a bit of communicating, the confidence was there to be able to put on a brave face and just get on with it but I think somebody..... and because I had my own children, so there was a bit of the behaviour management that came from that but I

Appendices

think somebody who did younger without quite so much worldly experience – that sounds terrible – but normal life experience, I guess – and transferrable skills and if they didn't have their own children I think they would have struggled to pick all of those up

So your previous experience, being a mature trainee, having children and so forth were important life experiences that allowed you to 'get on with it'

Yes, transferable skills really

And do you think also to have a degree of resilience, as well?

I think so, I think so. I think if I had been younger and I had been doing that there would have been an element that would have thought "they're going to pick up on the fact that I don't ...I'm not sure what I'm doing one hundred percent" and it would have been harder to carry off the brave face and pretend that you did know what you were doing...so I think so, definitely

Were there others....you've talked about having younger members of staff who had been through training more recently so it was a bit alike and you've talked briefly about [MFL trainee] also in the department, not in the department, but in the school....Were you able to access, do you think, sufficient support so that you weren't feeling....to mitigate against being isolated?

I think so. I think if [MFL trainee] hadn't been there it would have been a very different experience. I think we sort of clung to each other, like each other's lifelines, we were in contact, you know, loads, umm, so definitely, and then as I got to know [other Alliance maths trainee] a bit better especially when we swapped the roles at [school name] and [another school name] you know and we've kept in touch ...we used to work collaboratively a lot in our NQT year, ummm., especially as we seemed to have alternating classes as well.

Excerpt from Kate's interview:

Who was it you saw as um the expert, the expert teacher or teachers?

Oooh, that's rough. For me, it had to be my head of faculty and my mentor. My mentor more on a day to day basis, where I could him as a sounding board and I would say "I'm thinking of this" and that was daily but if I wanted some really....my head of faculty was a - they were so very different – but he was such a superb and dynamic teacher which is kind of how I wanted my teaching to go that um so if I wanted some really direct I would go to him and say "look this is where I'm really struggling, can you give me ten minutes" and you know he'd find it and he'd do that. And then in my second school my head of department who is currently my current head of department is, her geography knowledge is beyond, it's brilliant so I, I const, still constantly going in and saying "I don't get this" and she goes "that's fine"

So you actually see as I, suppose, having different people as experts for different things.

yes

So your current head of department because her knowledge of geography, your previous head of faculty because of, I suppose the inspiration and the

Yep

And his behaviour management, his ability to be calm in a stressful situation and work with the children was just phenomenal

and your mentor really for I suppose the nuts and bolts the nitty gritty the practical support.....

absolutely, yep, yep

References

- Akkerman, S. and Bakker, A. (2011) 'Boundary crossing and boundary objects', *Review of Educational Research*, 81(2), 132–169.
- Aldeman, C. and Libetti Mitchel, A. (2016) *No guarantees: Is it possible to ensure teachers are ready on day one?*, Sudbury, MA: Bellwether Education Partners.
- Aldrich, R. (1999) 'The apprentice in history' in Ainley, P. and Rainbird, H., eds., *Apprenticeship: Towards a new paradigm of learning*, London: Kogan Page, 14–24.
- Aldridge, D. (2015) 'The role of higher education in teacher education: A reorientation towards ontology' in Heilbronn, R. and Foreman–Peck, L., eds., *Philosophical perspectives on teacher education*, Chichester: Wiley–Blackwell, 111–131.
- Allen, J. M. (2009) 'Valuing practice over theory: How beginning teachers re-orient their practice in the transition from the university to the workplace', *Teaching and Teacher Education*, 25(5), 647–654.
- Allen, J. M. and Peach, D. (2007) 'Exploring connections between the in-field and on-campus components of a preservice teacher education program: a student perspective', *Asia-Pacific Journal of Cooperative Education*, 8(1), 23–36.
- Allen, R. (2015) 'Education policy', *National Institute Economic Review*, 231, R36–R43.
- Allen, R., Belfield, C., Greaves, E., Sharp, C. and Walker, M. (2014) *The costs and benefits of different initial teacher training routes*, London: Institute of Fiscal Studies.
- Allinder, R. (1994) 'The relationship between efficacy and the instructional practices of special education teachers and consultants', *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 7(2), 86–95.
- Allix, N. (2011) 'Knowledge and workplace learning' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 132–148.
- Alvesson, M. and Skoldberg, K. (2000) *Reflexive methodology: New visions for qualitative research*, London: Sage.

References

- Ambrosetti, A. and Dekkers, J. (2010) 'The interconnectedness of the roles of mentors and mentees in pre-service teacher education mentoring relationships', *Australian Journal of Teacher Education*, 35(6), 42–55.
- Anderson, J., Reder, L. and Simon, H. (1996) 'Situated learning and education', *Educational Researcher*, 25(4), 5–11.
- Anderson, L. M. and Stillman, J. A. (2013) 'Student teaching's contribution to preservice teacher development: A review of research focused on the preparation of teachers for urban and high-needs contexts', *Review of Educational Research*, 83(1), 3–69.
- Anderson, N., Barksdale, M. and Hite, C. (2005) 'Preservice teachers' observations of cooperating teachers and peers while participating in an early field experience', *Teacher Education Quarterly*, 32(4), 97–117.
- Archer, M. (2007) *Making our way through the world: Human reflexivity and social mobility*, Cambridge: Cambridge University Press.
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E. and Zellman, G. (1976) *Analysis of the school preferred reading programs in selected Los Angeles minority schools*, REPORT NO. R-2007-LAUSD, Santa Monica, CA: Rand Corporation (ERIC Document Reproduction Service No. 130 243).
- Ashton, P. and Webb, R. (1986) *Making a difference: Teachers' sense of efficacy and student achievement*, White Plains, NY: Longman.
- Association of Teachers and Lecturers (2014) 'Learning lessons', *Report – the magazine of the Association of Teachers and Lecturers*, March 2014, 10–12.
- Atwal, K. (2013) 'Theories of workplace learning in relation to teacher professional learning in UK primary schools', *Research in Teacher Education*, 3(2), 22–27.
- Baines, L. (2006) 'Deconstructing teacher certification', *Phi Delta Kappan*, 88(4), 326–328.
- Baines, L. (2010) 'The disintegration of teacher preparation', *Educational Horizons*, 88(3), 152–163.
- Ballou, D. and Podgursky, M. (2000) 'Reforming teacher preparation and licensing: What is the evidence?', *Teachers College Record*, 102(1), 5–27.

- Bandura, A. (1997) *Self efficacy: The exercise of control*, New York: Freeman & Co.
- Beach, D. and Bagley, C. (2012) 'The weakening role of education studies and the re-traditionalisation of Swedish teacher education', *Oxford Review of Education*, 38(3), 287–303.
- Beauchamp, G., Clarke, L., Hulme, M. and Murray, J. (2015) 'Teacher education in the United Kingdom post devolution: Convergences and divergences', *Oxford Review of Education*, 41(2), 154–170.
- Beck, J. (2009) 'Appropriating professionalism: restructuring the official knowledge base of England's 'modernised' teaching profession', *British Journal of Sociology of Education*, 30(1), 3–14.
- Beijaard, D., Meijer, P. C. and Verloop, N. (2004) 'Reconsidering research on teachers' professional identity', *Teaching and Teacher Education*, 20(2), 107–128.
- BERA (2014) 'Research and the teaching profession: Building the capacity for a self-improving education system. Final report of the BERA–RSA Inquiry into the role of research in teacher education', [online], available: <http://www.bera.ac.uk/wp-content/uploads/2013/12/BERA-RSA-Research-Teaching-Profession-FULL-REPORT-for-web.pdf> [accessed 27/7/17].
- Bernbaum, K., Patrick, H., Jackson, S. and Reid, K. (1985) 'A history of postgraduate initial teacher education in England and Wales, 1880–1980' in Hopkins, D. and Reid, K., eds., *Rethinking teacher education*, Beckenham: Croom Helm Ltd, 7–18.
- Berry, B., Montgomery, D., Curtis, R., Hernandez, M. and Snyder, J. (2008) *Creating and sustaining Urban Teacher Residencies: A new way to recruit, prepare, and retain effective teachers in high-needs districts*, The Aspen Institute/Center for Teaching Quality.
- Beyer, L. (1988) *Knowing and acting: Inquiry, ideology and educational studies*, London: Falmer Press.
- Biesta, G. (2015) 'How does a competent teacher become a good teacher?: On judgement, wisdom and virtuosity in teaching and teacher education' in Heibronn, R. and Foreman–Peck, L., eds., *Philosophical perspectives on teacher education*, Chichester: Wiley–Blackwell, 3–22.

References

- Billett, S. (1994) 'Situated learning – a workplace experience', *Australian Journal of Adult and Community Education*, 34(2), 112–130.
- Billett, S. (2008) 'Learning through work: Exploring instances of relational interdependencies', *International Journal of Educational Research*, 47(4), 232–240.
- Billett, S. (2011) 'Subjectivity, self and personal agency in learning through and for work' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 60–72.
- Bills, L., Briggs, M., Browne, A., Gillespi, H., Gordon, J., Husbands, C., Shreeve, A., Still, C. and Swatton, P. (2007) *Structures, management and process in initial teacher education: a systematic review*, London: University of London.
- Boe, E., Shin.S. and Cook, L. (2007) 'Does teacher preparation matter for beginning teachers in either special or general education?', *The Journal of Special Education*, 41(3), 158–170.
- Boeije, H. (2002) 'A purposeful approach to the constant comparative method in the analysis of qualitative interviews', *Quality & Quantity*, 36, 391–409.
- Bolton, G. (2014) *Reflective practice: Writing and professional development*, 4th ed., London: Sage.
- Bowen, B. (2013) 'Measuring teacher effectiveness when comparing alternatively and traditionally licensed high school technology education teachers in North Carolina', *Journal of Technology Education*, 25(1), 82–100.
- Boyd, D., Grossman, P., Lankford, H., Loeb, S. and Wyckhoff, J. (2005) *How changes in entry requirements alter the teacher workforce and affect student achievement*, Working paper 11844: National Bureau of Economic Research.
- Bradbury, L. U. and Koballa, T. R. (2008) 'Borders to cross: Identifying sources of tension in mentor–intern relationships', *Teaching and Teacher Education*, 24(8), 2132–2145.
- Brannen, J. (2005a) 'Mixed methods research: A discussion paper', *National Centre for Research Methods Methods Review Paper* [online], available: <http://eprints.ncrm.ac.uk/89/1/MethodsReviewPaperNCRM-005.pdf> [accessed 27/7/17].

- Brannen, J. (2005b) 'Mixing methods: The entry of qualitative and quantitative approaches into the research process', *International Journal of Social Research Methodology*, 8(3), 173–184.
- Bransford, J., Darling–Hammond, L. and LePage, P. (2005) 'Introduction' in Darling–Hammond, L. and Bransford, J., eds., *Preparing teachers for a changing world*, San Francisco: Jossey–Bass, 1–39.
- Brantlinger, A. and Smith, B. (2013) 'Alternative teacher certification and the new professionalism: The pre–service preparation of mathematics teachers in the New York City Teaching Fellows program', *Teachers College Record*, 115, 1–44.
- Bråten, I. and Ferguson, L. E. (2015) 'Beliefs about sources of knowledge predict motivation for learning in teacher education', *Teaching and Teacher Education*, 50, 13–23.
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, 3(2), 77–101.
- Brown, J., Collins, A. and Duguid, P. (1996) 'Situated cognition and the culture of learning' in McLellan, H., ed. *Situated learning perspectives*, Englewood Cliffs, NJ: Educational Technology Publications, 19–44.
- Brown, T. (2013) 'T10 Situated learning theory of Lave and Wenger', [online], available:
<https://pdfs.semanticscholar.org/49f4/9f71e2c7cbc0bed50dc36eda2a905f6734c3.pdf> [accessed 27/7/17].
- Brown, T., Rowley, H. and Smith, K. (2014) 'Rethinking research in teacher education', *British Journal of Educational Studies*, 62(3), 281–296.
- Brown, T., Rowley, H. and Smith, K. (2016) *The beginnings of school led teacher training: New challenges for university teacher education. School Direct research project final report*, Manchester: Manchester Metropolitan University.
- Browne, L. and Reid, J. (2012) 'Changing localities for teacher training: the potential impact on professional formation and the university sector response', *Journal of Education for Teaching: International Research and Pedagogy*, 38(4), 497–508.
- Bryman, A. (2012) *Social research methods*, 4th ed., Oxford: Oxford University Press.

References

- Bryman, A., Becker, S. and Sempik, J. (2008) 'Quality criteria for quantitative, qualitative and mixed methods research: A view from social policy', *International Journal of Social Research Methodology*, 11(4), 261–276.
- Buehl, M. M. and Fives, H. (2009) 'Exploring teachers' beliefs about teaching knowledge: Where does it come from? Does it change?', *The Journal of Experimental Education*, 77(4), 367–408.
- Burgess, H. (2013) 'Challenge and change in teacher education', *Research Intelligence*, 121, 9.
- Burn, K. and Mutton, T. (2013) *Review of research-informed clinical practice in teacher education, paper submitted to the BERA-RSA Inquiry*, London: BERA/RSA.
- Burns, J. (2013) 'Ex-troops without degrees to train as teachers', *BBC news*, 7 June [online], available: <http://www.bbc.co.uk/news/education-22798200> [accessed 7/8/14].
- Cairns, L. (2011) 'Learning in the workplace: Communities of practice and beyond' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 73–85.
- Carter, A. (2015) *Carter Review of Initial Teacher Training (ITT)*, London: Crown copyright.
- Carter, H., Amrein-Beardsley, A. and Hansen, C. (2011) 'So NOT amazing! Teach for America Corps members' evaluation of the first semester of their teacher preparation program', *Teachers College Record*, 113(5), 861–894.
- Chamberland, C. (2013) 'From apprentice to master: Social disciplining and surgical education in early modern London, 1570–1640', *History of Education Quarterly*, 53(1), 21–44.
- Chambers, G., Hobson, A. and Tracey, L. (2010) 'Teaching could be a fantastic job but ...': Three stories of student teacher withdrawal from initial teacher preparation programmes in England', *Teachers and Teaching*, 16(1), 111–129.
- Chankseliani, M., Keep, E. and Wilde, S. (2017) *People and Policy: A comparative study of apprenticeship across eight national contexts*, Oxford: WISE Research/University of Oxford.

- Check, J. and Schutt, R. (2011) *Research methods in education*, Thousand Oaks: Sage.
- Cheng, M., Cheng, A. and Tang, S. (2010) 'Closing the gap between the theory and practice of teaching: Implications for teacher education programmes in Hong Kong', *Journal of Education for Teaching*, 36(1), 91–104.
- Chong, S., Low, E. and Goh, K. (2011) 'Emerging professional teacher identity of pre-service teachers', *Australian Journal of Teacher Education*, 36(8), 50–64.
- Christie, F., Conlon, T., Gemmell, T. and Long, A. (2004) 'Effective partnership? Perceptions of PGCE student teacher supervision', *European Journal of Teacher Education*, 27(2), 109–123.
- Clough, P. (2002) *Narratives and fictions in educational research*, Buckingham: Open University Press.
- Cochran-Smith, M. (2004) 'The Problem of Teacher Education', *Journal of Teacher Education*, 55(4), 295–299.
- Cochran-Smith, M., Ell, F., Grudnoff, L., Ludlow, L., Haigh, M. and Hill, M. (2014) 'When complexity theory meets critical realism: A platform for research on initial teacher education', *Teacher Education Quarterly*, 41(1), 105–122.
- Cohen, P. (1995) 'Apprenticeship a la mode: Some reflections on learning as cultural labour' in Ainley, P. and Rainbird, H., eds., *Apprenticeship: Towards a new paradigm*, London: Kogan Page, p. 129–147.
- Coldron, J. and Smith, R. (1999) 'Active location in teachers' construction of their professional identities', *Journal of Curriculum Studies*, 31(6), 711–726.
- Collins, A. (1989) *Cognitive apprenticeship and instructional technology*, Champaign, Illinois: Centre for the study of reading, University of Illinois at Urbana-Champaign.
- Conroy, J., Donaldson, G. and Menter, I. (2014) 'Work-based learning in teacher education: A Scottish perspective' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 207–219.

References

- Constantine, J., Player, D., Silva, T., Hallgren, K., Grider, M. and Deke, J. (2009) *An evaluation of teachers trained through different routes to certification: Final report (NCEE 2009-4043)*, Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Consuegra, E., Engels, N. and Struyven, K. (2014) 'Beginning teachers' experience of the workplace learning environment in alternative teacher certification programs: A mixed methods approach', *Teaching and Teacher Education*, 42, 79-88.
- Conway, P., Murphy, R. and Rutherford, V. (2014) 'Learningplace', practices and pre-service teacher education in Ireland: Knowledge generation, partnerships and pedagogy' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 221-241.
- Coughlan, S. (2017) 'Teacher shortage getting worse, say MPs', *BBC news*, 21 February [online], available: <http://www.bbc.co.uk/news/education-39028840> [accessed 26/10/17].
- Crasborn, F., Hennissen, P., Brouwer, N., Korthagen, F. and Bergen, T. (2011) 'Exploring a two-dimensional model of mentor teacher roles in mentoring dialogues', *Teaching and Teacher Education*, 27(2), 320-331.
- Creswell, J. (2015) *A concise introduction to mixed methods research*, Thousand Oaks, CA: Sage.
- Creswell, J. and Plano Clark, V. (2011) *Designing and conducting mixed methods research*, Thousand Oaks, CA: Sage.
- Darling-Hammond, L. (2012) 'Teacher preparation and development in the United States: A changing policy landscape' in Darling-Hammond, L. and Lieberman, A., eds., *Teacher education around the world: Changing policies and practices*, Abingdon: Routledge, 130-150.
- Darling-Hammond, L. (2014) 'Strengthening clinical preparation: The Holy Grail of teacher education', *Peabody Journal of Education*, 89(4), 547-561.
- Darling-Hammond, L., Chung, L. and Frelow, F. (2002) 'Variation in teacher preparation: How well do different pathways prepare teachers to teach?', *Journal of Teacher Education*, 53(4), 286-302.
- Darling-Hammond, L., Holtzman, D., Gatlin, S. and Heilig, J. (2005) 'Does teacher preparation matter? Evidence about teacher certification, Teach

- for America, and teacher effectiveness', *Education Policy Analysis Archives*, 13(42), 1–48.
- Darling–Hammond, L. and Liberman, A., eds. (2012) *Teacher education around the world: Changing policies and practices*, Abingdon: Routledge.
- Day, C. and Kington, A. (2008) 'Identity, well-being and effectiveness: The emotional contexts of teaching', *Pedagogy, Culture & Society*, 16(1), 7–23.
- Day, C., Kington, A., Stobart, G. and Sammons, P. (2006) 'The personal and professional selves of teachers: Stable and unstable identities', *British Educational Research Journal*, 32(4), 601–616.
- de Leeuw, E. (2008) 'Choosing the method of data collection' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook on survey methodology*, New York: Psychology Press, 113–136.
- de Leeuw, E. and Hox, J. (2008) 'Self-administered questionnaires' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook on survey methodology*, New York: Psychology Press, 239–263.
- de Leeuw, E., Hox, J. and Dillman, D. (2008) 'The cornerstones of survey research' in de Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook of survey research*, New York: Psychology Press, 1–17.
- Deakin, H. and Wakefield, K. (2013) 'Skype interviewing: reflections of two PhD researchers', *Qualitative Research*, 14(5), 603–616.
- Denzin, N. and Lincoln, Y., eds. (2011) *The SAGE handbook of qualitative research*, Thousand Oaks, CA: Sage.
- Department for Education (2010) *The importance of teaching*, Norwich: The Stationery Office.
- Department for Education (2011) *Teachers' Standards, Reference: DFE-00066-2011*, London: Crown Copyright.
- Department for Education (2014) 'Get into teaching – school-led teacher training', [online], available: <http://www.education.gov.uk/get-into-teaching/teacher-training-options/school-based-training> [accessed 9/11/14].
- Department for Education (2015) *Initial Teacher Training performance profiles: 2013 to 2014 academic year*, London: Department for Education.

References

- Department for Education (2016) *Statistical first release: School workforce in England: November 2015*, London: Department for Education.
- Department for Education (2017) 'School-led training', [online], available: <https://getintoteaching.education.gov.uk/explore-my-options/teacher-training-routes/school-led-training> [accessed 21/10/17].
- Department for Education (2018) 'Bursaries and funding', [online], available: <https://getintoteaching.education.gov.uk/funding-and-salary/overview> [accessed 18/7/18].
- Dewey, J. (1971) 'On the relation of theory and practice in education' in Boydston, J., ed. *The middle works of John Dewey*, Carbondale Ill.: Southern Illinois University Press (Vol. 3, 249–271 (originally published 1904).
- Dillman, D. (2008) 'The logic and psychology of constructing questionnaires' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook on survey methodology*, New York: Psychology Press, 161–175.
- Dornan, T. and Morke, A.-M. (2014) 'Work-based, accredited professional development education: Insights from medicine' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 73–86.
- Draper, J. (2012) 'Hong Kong: Professional preparation and development of teachers in a market economy' in Darling-Hammond, L. and Liebermann, A., eds., *Teacher education around the world: Changing policies and practices*, Abingdon: Routledge, pp. 81–97.
- Duffin, L., French, B. and Patrick, H. (2012) 'The Teachers' Sense of Efficacy Scale: Confirming the factor structure with beginning pre-service teachers', *Teaching and Teacher Education*, 28, 827–834.
- Dyke, M. (2009) 'An enabling framework for reflexive learning: Experiential learning and reflexivity in contemporary modernity', *International Journal of Lifelong Education*, 28(3), 289–310.
- Dyke, M. (2017) 'Paradoxes of a long life learning: An exploration of Peter Jarvis's contribution to experiential learning theory', *International Journal of Lifelong Education*, 36(1–2), 23–34.
- Edwards, A. (2010) *Being an expert professional practitioner: The relational turn in expertise*, Dordrecht: Springer.

- Edwards, A. (2014) 'Learning from experience in teaching: A cultural historical critique' in Ellis, V. and Orchard, J., eds., *Learning teaching from experience: Multiple perspectives and international contexts*, London: Bloomsbury, 47–61.
- Edwards, A. and Protheroe, L. (2004) 'Teaching by proxy: Understanding how mentors are positioned in partnerships', *Oxford Review of Education*, 30(2), 183–197.
- Ellis, V. (2015) 'Failing to innovate? Failing to communicate', *Viv Ellis blog April 2* [online], available: <http://vivellis.org/2015/04/02/failing-to-innovate-failing-to-communicate/> [accessed 28/7/15].
- Ellis, V. and McNicholl, J. (2015) *Transforming teacher education: Reconfiguring the academic work*, London: Bloomsbury.
- Ellis, V. and Orchard, J. (2014) 'Learning teaching 'from experience': Towards a history of the idea' in Ellis, V. and Orchard, J., eds., *Learning teaching from experience: Multiple perspectives and international contexts*, London: Bloomsbury, 1–17.
- Emmel, N. (2013) *Sampling and choosing realist cases in qualitative research: A realist approach*, London: Sage.
- Emsheimer, P. and Ljunggren de Silva, N. (2011) 'Pre-service teachers' reflections on practice in relation to theories' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 147–167.
- Engeström, Y. (2001) 'Expansive learning at work: Toward an activity theoretical reconceptualization', *Journal of Education and Work*, 14(1), 133–156.
- Engeström, Y. (2007) 'From communities of practice to mycorrhizae' in Hughes, J., Jewson, N. and Unwin, L., eds., *Communitites of practice: Critical perspectives*, Abingdon: Routledge, 41–54.
- Eraut, M. (2000) 'Non-formal learning and tacit knowledge in professional work', *British Journal of Educational Psychology*, 70, 113–136.
- Eraut, M. (2002) 'Conceptual analysis and research questions: Do the concepts of "Learning Community" and "Community of Practice" provide added value?', *American Educational Research Association*, April 1–5, 2002.

References

- Eraut, M. (2004) 'Informal learning in the workplace', *Studies in Continuing Education*, 26(2), 247–273.
- Eraut, M. (2009) 'Transfer of knowledge between education and workplace settings' in Lauder, H. and Porter, J., eds., *Knowledge, values and educational policy: A critical perspective*, Oxford: Routledge, 65–84.
- European Commission (2015) *Shaping career-long perspectives on teaching: A guide on policies to improve Initial Teacher Education*, Brussels: European Commission.
- Evans, K., Guile, D. and Harris, J. (2011) 'Rethinking work-based learning: For education professionals and professionals who educate' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 149–162.
- Evans, K., Hodkinson, P., Rainbird, H. and Unwin, L. (2006) *Improving workplace learning*, Abingdon: Routledge.
- Evans, L. (2010) 'Professionals or technicians? Teacher preparation programs and occupational understandings', *Teachers and Teaching*, 16(2), 183–205.
- Fackler, S. and Malmberg, L.-E. (2016) 'Teachers' self-efficacy in 14 OECD countries: Teacher, student group, school and leadership effects', *Teaching and Teacher Education*, 56, 185–195.
- Feiman-Nemser, S. (2001) 'From preparation to practice: Designing a continuum to strengthen and sustain teaching', *Teachers College Record*, 103(6), 1013–1055.
- Feiman-Nemser, S. (2006) 'Teachers as teacher educators', *European Journal of Teacher Education*, 21(1), 63–74.
- Feiman-Nemser, S. and Buchmann, M. (1987) 'When is student teaching teacher education?', *Teaching and Teacher Education*, 3(4), 255–273.
- Fielding, N. (2010) 'Mixed methods research in the real world', *International Journal of Social Research Methodology*, 13(2), 127–138.
- Fives, H. (2003) 'What is teacher efficacy and how does it relate to teachers' knowledge? A theoretical review', *American Educational Research Association Annual Conference*, Chicago, April 2003.

- Flores, B. B., Desjean-Perrotta, B. and Steinmetz, L. E. (2004) 'Teacher efficacy: A comparative study of university certified and alternatively certified teachers', *Action in Teacher Education*, 26(2), 37–46.
- Flores, M. (2014) 'Teacher learning in the workplace in pre-service teacher education in Portugal: Potential and limits from a pre-service teacher perspective' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 243–260.
- Florian, L. and Pantic, N., eds. (2013) *Learning to Teach Part 1: Exploring the history and role of higher education in teacher education*, York: The Higher Education Academy.
- Fowler, F. and Cosenza, C. (2008) 'Writing effective questions' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook of survey methodology*, New York: Psychology Press, 136–160.
- Fox, A. and Peters, M. (2013) 'First year teachers: Certification program and assigned subject on their self-efficacy', *Current Issues in Education*, 16(1), 1–16.
- Fuller, A. (2007) 'Critiquing theories of learning and communities of practice' in Hughes, J., Jewson, N. and Unwin, L., eds., *Communities of practice: Critical perspectives*, Abingdon: Routledge, 17–29.
- Fuller, A., Hodkinson, H., Hodkinson, P. and Unwin, L. (2005) 'Learning as peripheral participation in communities of practice: A reassessment of key concepts in workplace learning', *British Educational Research Journal*, 31(1), 49–68.
- Fuller, A. and Unwin, L. (2003) 'Learning as apprentices in the contemporary UK Workplace: Creating and managing expansive and restrictive participation', *Journal of Education and Work*, 16(4), 407–426.
- Fuller, A. and Unwin, L. (2004) 'Expansive learning environments: Integrating organisational and personal development' in Rainbird, H., Fuller, A. and Munro, A., eds., *Workplace learning in context*, London: Routledge, 126–144.
- Fuller, A. and Unwin, L. (2008) *Towards expansive apprenticeships: A commentary by the Teaching and Learning Research Programme*, London: TLRP, Institute of Education, University of London.

References

- Fuller, A. and Unwin, L. (2009) 'Change and continuity in apprenticeship: The resilience of a model of learning', *Journal of Education and Work*, 22(5), 405–416.
- Fuller, A. and Unwin, L. (2011) 'Workplace learning and the organisation' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 46–59.
- Furlong, J. and Maynard, T. (1995) *Mentoring student teachers: The knowledge of professional growth*, London: Routledge.
- Furlong, J., McNamara, O., Campbell, A., Howson, J. and Lewis, S. (2008) 'Partnership, policy and politics: Initial teacher education in England under New Labour', *Teachers and Teaching*, 14(4), 307–318.
- Geographical Association (2015) *Geography initial teacher education and teacher supply in England: A national research report by the Geographical Association*, Sheffield: Geographical Association.
- Gewirtz, S. (2013) 'Developing teachers as scholar–citizens, reasserting the value of university involvement in teacher education' in Florian, L. and Pantic, N., eds., *Learning to Teach Part 1: Exploring the history and role of higher education in teacher education*, York: Higher Education Academy, 10–13.
- Gheradi, S., Nicolini, D. and Odella, F. (1998) 'Toward a social understanding of how people learn in organisations: The notion of situated curriculum', *Management Learning*, 29(3), 273–297.
- Goe, L. and Stickler, L. (2008) *Teacher quality and student achievement: Making the most of recent research*, National Comprehensive Center for Teacher Quality, Washington DC.
- Goldhaber, D. and Brewer, D. (2000) 'Does teacher certification matter? High school teacher certification status and student achievement', *Educational Evaluation and Policy Analysis*, 22(2), 129–145.
- Goodwin, A. (2012) 'Quality teachers, Singapore style' in Darling–Hammond, L. and Lieberman, A., eds., *Teacher education around the world: Changing policies and practices*, Abingdon: Routledge.
- Goodwin, A. L., Roegman, R. and Reagan, E. M. (2015) 'Is experience the best teacher? Extensive clinical practice and mentor teachers perspectives' on effective teaching', *Urban Education*, 51(10), 1198–1225.

- Gore, J. (2001) 'Beyond our differences: A reassembling of what matters in teacher education', *Journal of Teacher Education*, 52(2), 124–135.
- Gospel, H. (1998) 'The revival of apprenticeship training in Britain?', *British Journal of Industrial Relations*, 36(3), 435–357.
- Gove, M. (2010) 'Speech to the annual conference of the National College for Leadership of Schools and Children's Services', [online], available: <https://www.gov.uk/government/speeches/michael-gove-to-the-national-college-annual-conference-birmingham> [accessed 09/08/13].
- Greenbank, P. (2003) 'The role of values in educational research: the case for reflexivity', *British Educational Research Journal*, 29(6), 791–801.
- Greenberg, J., McKee, A. and Walsh, K. (2013) *Teacher prep review: A review of the nation's teacher preparation programs*, Washington, DC: National Council on Teacher Quality.
- Griffiths, V. (2007) 'Experiences of training on an employment-based route into teaching in England', *Journal of In-Service Education*, 33(1), 107–123.
- Grossman, P. (1990) *The making of a teacher: Teacher knowledge and teacher education*, Columbia University: Teachers College.
- Grossman, P. (1991) 'Overcoming the apprenticeship of observation in teacher education coursework', *Teaching and Teacher Education*, 7(4), 345–357.
- Grossman, P. and Loeb, S. (2010) 'Learning from multiple routes', *Educational Leadership*, May 2010, 22–27.
- Groves, R., Fowler, F., Couper, M., J., L., Singer, E. and Tourangeau, R. (2009) *Survey methodology*, 2nd ed., New Jersey: John Wiley & sons.
- Grow Your Own Illinois (2017) 'Grow Your Own Illinois', [online], available: www.growyourownteachers.org [accessed 17/4/17].
- Grubb, W. and Lazerson, M. (2006) 'The globalization of rhetoric and practice: the education gospel and vocationalism' in Lauder, H., Brown, P., Dillabough, J. and Halsey, A., eds., *Education, Globalisation & Social Change*, Oxford: Oxford University Press, 295–307.
- Guha, R., Hylan, M. and Darling-Hammond, L. (2017) 'The teacher Residency: A practical path to recruitment and retention', *American Educator*, Spring 2017, 31–34.

References

- Guha, R., Hyler, M. E. and Darling–Hammond, L. (2016) *The Teacher Residency: An innovative model for preparing teachers*, Palo Alto, CA: Learning Policy Institute.
- Guile, D. and Young, M. (1999) 'Beyond the institution of apprenticeship: Towards a social theory of learning as the production of knowledge' in Ainley, P. and Rainbird, H., eds., *Apprenticeship: Towards a new paradigm of learning*, London: Kogan Page, 111–128.
- Guillemin, M. and Gillam, L. (2016) 'Ethics, reflexivity, and “ethically important moments” in research', *Qualitative Inquiry*, 10(2), 261–280.
- Guo, Y., Connor, C., Yang, Y., Roehrig, A. and Morrison, F. (2012) 'The effects of teacher qualification, teacher self–efficacy, and classroom practices on fifth graders' literacy outcomes', *The Elementary School Journal*, 113(1), 3–21.
- Hager, P. (2011) 'Theories of workplace learning' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 17–31.
- Hagger, H. and McIntyre, D. (2006) *Learning teaching from teachers: Realising the potential of school–based teacher education*, Maidenhead: Oxford University Press.
- Hahn, C. (2012) 'Apprenticeship in higher education in France: An experiential device to help apprentices to link academic knowledge and work experience', *Journal of Vocational Education and Training*, 64(1), 75–85.
- Hammersley, M. (2005) 'What can the literature on communities of practice tell us about educational research? Reflections on some recent proposals', *International Journal of Research & Method in Education*, 28(1), 5–21.
- Hammersley, M. (2008) 'Troubles with triangulation' in Bergman, M. M., ed. *Advances in mixed methods research*, London: Sage, 22–36.
- Hanna, P. (2012) 'Using internet technologies (such as Skype) as a research medium: a research note', *Qualitative Research*, 12(2), 239–242.
- Hargreaves, D. (2007) 'Teaching as a research–based profession: Possibilities and prospects (The Teacher Training Agency lecture 1996)' in Hammersley, M., ed. *Educational research and evidence–based practice*, London: Sage, 3–17.

- Harrell, P. and Harris, M. (2006) 'Teacher preparation without boundaries; A two-year study of an online teacher certification program', *Journal of Technology and Teacher education*, 14(4), 755–774.
- Hattie, J. and Yates, G. (2014) *Visible learning and the science of how we learn*, Abingdon: Routledge.
- Hayes, D. (1999) 'Opportunities and obstacles in the competency-based training and assessment of primary teachers in England', *Harvard Educational Review*, 69(1), 1–28.
- Hazell, W. (2017) 'The knowledge evangelists move in on teacher training', *Times Educational Supplement Magazine* [online], available: <https://www.tes.com/news/tes-magazine/tes-magazine/knowledge-evangelists-move-teacher-training> [accessed 22/7/17].
- Hedegaard-Sorensen, L. and Tefler, S. (2011) 'Situated professionalism in special education practice' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 113–129.
- Heibronn, R. and Foreman-Peck, L. (2015) 'Editors' introduction' in Heibronn, R. and Foreman-Peck, L., eds., *Philosophical perspectives on teacher education*, Chichester: Wiley-Blackwell, xviii–xxiii.
- Heikkinen, H., Tynjala, P. and Kiviniemi, U. (2011) 'Integrative pedagogy in practicum: Meeting the second order paradox of teacher education' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 91–112.
- Heneman, H., Kimball, S. and Milanowski, A. (2006) *The Teacher Sense of Efficacy Scale: Validation evidence and behavioral prediction*, Wisconsin Center for Education Research: University of Wisconsin-Madison.
- Henson, R. K., Kogan, L. R. and Vacha-Haase, T. (2001) 'A reliability generalization study of the Teacher Efficacy Scale and related instruments', *Educational and Psychological Measurement*, 61(3), 404–420.
- Hoban, G. (2002) *Teacher learning for educational change*, Buckingham: Open University Press.
- Hobson, A. J., Ashby, P., Malderez, A. and Tomlinson, P. D. (2009a) 'Mentoring beginning teachers: What we know and what we don't', *Teaching and Teacher Education*, 25(1), 207–216.

References

- Hobson, A. J., Malderez, A., Tracey, L., Giannakaki, M., Pell, G. and Tomlinson, P. D. (2008) 'Student teachers' experiences of initial teacher preparation in England: core themes and variation', *Research Papers in Education*, 23(4), 407–433.
- Hobson, A. J., Malderez, A., Tracey, L., Homer, M., Ashby, P., Mitchell, N., McIntyre, J., Cooper, D., Roper, T., Chambers, G. and P., T. (2009b) *Becoming a teacher: Teacher's experiences of initial teacher training, induction and early professional development. Final report.*, Nottingham: University of Nottingham & Department for Children, Schools and Families.
- Hodgson, J. (2014) 'Surveying the wreckage: The professional response to changes to initial teacher training in the UK', *English in Education*, 48(1), 7–25.
- Hodkinson, H. and Hodkinson, P. (2004) 'Rethinking the concept of community of practice in relation to schoolteachers' workplace learning', *International Journal of Training and Development*, 8(1), 21–31.
- Hodkinson, P. and Hodkinson, H. (2003) 'Individuals, communities of practice and the policy context: School teachers' learning in their workplace', *Studies in Continuing Education*, 25(1), 3–21.
- Hodkinson, P. and Hodkinson, H. (2004) 'The significance of individuals' dispositions in workplace learning: a case study of two teachers', *Journal of Education and Work*, 17(2), 167–182.
- Hodson, E., Smith, K. and Brown, T. (2012) 'Reasserting theory in professionally based initial teacher education', *Teachers and Teaching*, 18(2), 181–195.
- Hordern, J. (2014) 'The logic and implications of school-based teacher formation', *British Journal of Educational Studies*, 62(3), 231–248.
- Hoskin, K. and Anderson-Gough, F. (2004) 'The context of learning in professional work environments: Insights from the accountancy profession' in Rainbird, H., Fuller, A. and Munro, A., eds., *Workplace learning in context*, London: Routledge, 71–88.
- Howson, J. and Waterman, C. (2013) *The future of teacher education in England: Developing a strategy*, Amersham: IRIS press.
- Huberman, M. (1989) 'The professional life cycle of teachers', *Teachers College Record*, 91(1), 31–57.

- Hudson, P. and Millwater, J. (2008) 'Mentors' views about developing effective English teaching practices', *Australian Journal of Teacher Education*, 33(5).
- Hughes, J., Jewson, N. and Unwin, L. (2007) 'Introduction. Communities of practice: a contested concept in flux' in Hughes, J., Jewson, N. and Unwin, L., eds., *Communitites of practice: Critical perspectives*, Abingdon: Routledge, 1–16.
- Humphrey, D. and Wechsler, M. (2007) 'Insights into alternative certification: Initial findings from a national study', *Teachers College Record*, 109(3), 483–530.
- Hutchings, M., Maylor, U., Mendick, H., Menter, I. and Smart, S. (2006) *An evaluation of innovative approaches to teacher training on the Teach First programme: A final report to the Training and Development Agency for Schools*, London: Institute for Policy Studies in Education, London Metropolitan University.
- Hutchinson, S. A. (2011) 'Boundaries and bricolage: Examining the roles of universities and schools in student teacher learning', *European Journal of Teacher Education*, 34(2), 177–191.
- Illeris, K. (2011) 'Workplaces and learning' in Malloch, M., Cairns, L., Evans, K. and O'Connor, B., eds., *The SAGE handbook of workplace learning*, London: Sage, 32–45.
- Iredale, A., Orr, K., Bailey, W. and Wormald, J. (2013) 'Confidence, risk, and the journey into praxis: Work-based learning and teacher development', *Journal of Education for Teaching: International Research and Pedagogy*, 39(2), 197–208.
- Jackson, A. and Burch, J. (2015) 'School Direct, a policy for initial teacher training in England: Plotting a principled pedagogical path through a changing landscape', *Professional Development in Education*, 42(4), 511–526.
- Johnson, B. and Christensen, L. (2012) *Educational research: Quantitative, qualitative, and mixed approaches*, 4th ed., Thousand Oaks, CA: Sage.
- Johnson, R. and Onwuegbuzie, A. (2004) 'Mixed methods research: A research paradigm whose time has come', *Educational Researcher*, 33(7), 14–26.

References

- Jones, M. and Straker, K. (2006) 'What informs mentors' practice when working with trainees and newly qualified teachers? An investigation into mentors' professional knowledge base', *Journal of Education for Teaching: International Research and Pedagogy*, 32(2), 165–184.
- Jonsson, A. and Mattsson, M. (2011) 'Assessing teacher competency during practicum' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 169–186.
- Kane, T., Rockoff, J. and Staiger, D. (2008) 'What does certification tell us about teacher effectiveness? Evidence from New York City', *Economics of Education Review*, 27(6), 615–631.
- Kansanen, P. (2014) 'Teaching as a Master's level profession in Finland: Theoretical reflections and practical solutions' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 279–292.
- Keating, J. (2010) 'Teacher training – up to the 1960s', [online], available: <http://www.history.ac.uk/history-in-education/project-papers/topics.html> [accessed 28/2/2104].
- Kelly, A. (2015) 'Teacher training: a missed opportunity', *Times Higher Education* 12 Feb [online], available: <https://www.timeshighereducation.co.uk/comment/opinion/teacher-training-a-missed-opportunity/2018423.article> [accessed 24/8/17].
- Kelly, C. and Pitfield, M. (2013) 'School Direct: a hastily constructed model or a systematically designed campaign?', *Forum*, 55(3), 447–460.
- Kennedy, M. (1999) 'Ed schools and the problem of knowledge' in Ratha, J. and McAninch, eds., *What counts as knowledge in teacher education?*, Norwood, NJ: Ablex, 29–46.
- Kim, Y. (2010) 'The pilot study in qualitative inquiry: Identifying issues and learning lessons for culturally competent research', *Qualitative Social Work*, 10(2), 190–206.
- Klassen, R., Bong, M., Usher, E., Chong, W., Huan, V., Wong, I. and Georgiou, T. (2009) 'Exploring the validity of a teachers' self-efficacy scale in five countries', *Contemporary Educational Psychology*, 34, 67–76.
- Klassen, R., Tze, V., Betts, S. and Gordon, K. (2011) 'Teacher efficacy research 1998–2009: Signs of progress or unfilled promise?', *Educational Psychology Review*, 23, 21–43.

- Klassen, R. and Usher, E. (2010) 'Self efficacy in educational settings: Recent research and emerging directions' in Karabenick, S. and Urban, T., eds., *Advances in motivation and achievement: Decade ahead*, Bradford: Emerald Group, 1–33.
- Klassen, R. M., Chong, W. H., Huan, V. S., Wong, I., Kates, A. and Hannok, W. (2008) 'Motivation beliefs of secondary school teachers in Canada and Singapore: A mixed methods study', *Teaching and Teacher Education*, 24(7), 1919–1934.
- Knight, R. (2015) 'Postgraduate student teachers' developing conceptions of the place of theory in learning to teach: 'more important to me now than when I started"', *Journal of Education for Teaching*, 41(2), 145–160.
- Knoblauch, D. and Chase, M. A. (2015) 'Rural, suburban, and urban schools: The impact of school setting on the efficacy beliefs and attributions of student teachers', *Teaching and Teacher Education*, 45, 104–114.
- Ko, J. and Sammons, P. (2013) *Effective teaching: A review of research and evidence*, Reading: CfBT Education Trust.
- Koc, I. (2012) 'Preservice science teachers reflect on their practicum experiences', *Educational Studies*, 38(1), 31–38.
- Korthagen, F., Kessels, J., Koster, B., Lagerwerf, B. and Wubbels, T. (2001) *Linking practice and theory: The pedagogy of Realistic Teacher Education*, Mahwah, NJ: Lawrence Erlbaum Associates.
- Korthagen, F. A. J. (2010) 'Situated learning theory and the pedagogy of teacher education: Towards an integrative view of teacher behavior and teacher learning', *Teaching and Teacher Education*, 26(1), 98–106.
- Kosnick, C., Cleovoulou, Y., Fletcher, R., Harris, T., McGlynn–Stewart, M. and Beck, C. (2011) 'Becoming teacher educators: An innovative approach to teacher education preparation', *Journal of Education for Teaching*, 27(3), 351–364.
- Kowal, S. and O'Donnell, D. (2014) 'Transcription as a crucial step of data analysis' in Flick, U., ed. *The Sage handbook of qualitative data analysis*, London: Sage.
- Kwan, T. and Lopez–Real, F. (2010) 'Identity formation of teacher–mentors: An analysis of contrasting experiences using a Wengerian matrix framework', *Teaching and Teacher Education*, 26(3), 722–731.

References

- Laczko-Kerr, I. and Berliner, D. (2002) 'The effectiveness of "Teach for America" and other under-certified teachers on student academic achievement: A case of harmful public policy', *Education Policy Analysis Archives*, 10(37), 1–53.
- Larrivee, B. (2008) 'Development of a tool to assess teachers' level of reflective practice', *Reflective Practice*, 9(3), 341–360.
- Lave, J. (1993) 'The practice of learning' in Chaiklin, S. and Lave, J., eds., *Understanding practice: Perspectives on activity and context*, Cambridge: Cambridge University Press, 3–32.
- Lave, J. (1996) 'Teaching, as learning, in practice', *Mind, Culture, and Activity*, 3(3), 149–164.
- Lave, J. and Wenger, E. (1991) *Situated learning: Legitimate peripheral participation*, Cambridge: University of Cambridge.
- Lawson, H. (1983) 'Toward a model of teacher socialization in physical education: The subjective warrant, recruitment and teacher education', *Journal of Teaching in Physical Education*, 2(3), 3–16.
- Lawson, T., Çakmak, M., Gündüz, M. and Busher, H. (2015) 'Research on teaching practicum – a systematic review', *European Journal of Teacher Education*, 38(3), 392–407.
- Leonard, D. (2002) *Learning theories A to Z*, Westport, CT: Oryx Press.
- Lewis, P. (2015) "'Grown Your Own Teachers" plans will tackle long-standing vacancies in the region', *Daily Record* [online], available: <http://www.dailyrecord.co.uk/news/local-news/grown-your-teachers-plans-tackle-5650886> [accessed 27/7/17].
- Li, L. C., Grimshaw, J. M., Nielsen, C., Judd, M., Coyte, P. C. and Graham, I. D. (2009) 'Evolution of Wenger's concept of community of practice', *Implement Sci* [online], available: <https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-4-11> [accessed 27/7/17].
- Lichtman, M. (2013) *Qualitative research in education: A user's guide*, 3rd ed., Thousand Oaks, CA: Sage.
- Lincoln, Y. and Guba, E. (2013) *The constructivist credo*, Walnut Creek, CA: Left Coast Press.

- Lincoln, Y., Lynham, S. and Guba, E. (2011) 'Paradigmatic controversies, contradictions and emerging confluences, revisited' in Denzin, N. and Lincoln, Y., eds., *The SAGE Handbook of Qualitative Research*, 4th ed., Thousand Oaks, CA: Sage, 199–265.
- Lloyd, G. M., Arbaugh, F., Knight, S. L., Edmondson, J., Nolan, J., McDonald, S. P. and Whitney, A. E. (2012) 'Beyond the teacher certification program debate: From models to features', *Journal of Teacher Education*, 63(3), 169–170.
- Lortie, D. (2002) *Schoolteacher: A sociological study*, 2nd ed., Chicago: University of Chicago Press.
- Lovat, T. and McLeod, J. (2006) 'Fully professionalised teacher education: An Australian study in persistence', *Asia-Pacific Journal of Teacher Education*, 34(3), 287–300.
- Lynn, P. (2008) 'The problem of non-response' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook of survey methodology*, New York: Psychology Press, 35–55.
- Maguire, M. (2014) 'Reforming teacher education in England: 'an economy of discourses of truth'', *Journal of Education Policy*, 29(6), 774–784.
- Mair, P. (2008) 'Comparative analysis: Case-oriented versus variable-oriented research' in Della Porter, D. and Keating, M., eds., *Approaches and methodologies in the social sciences: A pluralist perspective*, Cambridge: Cambridge University Press, 177–197.
- Manfreda, K. and Vehovar, V. (2008) 'Internet surveys' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook on survey methodology*, New York: Psychology Press, 264–284.
- Mannikko-Barbutiu, S., Rorrison, D. and Zeng, L. (2011) 'Memorable encounters: Learning narratives from pre-service teachers' practicum' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 45–66.
- Mason, J. (2006) 'Six strategies for mixing methods and linking data in social science research', *NCRM Working Paper. ESRC National Centre for Research Methods* [online], available: <http://eprints.ncrm.ac.uk/482/> [accessed 27/7/17].
- Matsko, K. K. and Hammerness, K. (2013) 'Unpacking the "Urban" in Urban Teacher Education', *Journal of Teacher Education*, 65(2), 128–144.

References

- Mattson, M., Vidar Eilertson, T. and Rorrison, D. (2011) 'What is practice in teacher education' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education?*, Rotterdam: Sense, 1–15.
- Mauthner, N. and Doucet, A. (2003) 'Reflexive accounts and accounts of reflexivity in qualitative data analysis', *Sociology*, 37, 413–31.
- Maxwell, J. (2012) *A Realist approach for qualitative research*, London: Sage.
- May, T. and Perry, B. (2014) 'Reflexivity and the practice of qualitative research' in Flick, U., ed. *The SAGE handbook of qualitative data analysis*, London: Sage, 109–122.
- May, V. (2010) 'What to do with contradictory data? Realities Toolkit #12', [online], available: <http://eprints.ncrm.ac.uk/1322/1/12-toolkit-contradictory-data.pdf> [accessed 7/8/17].
- McIntyre, D. and Hagger, H. (1993) 'Teachers' expertise and models of mentoring' in McIntyre, D., Hagger, H. and Wilkin, M., eds., *Mentoring: Perspectives on school-based teacher education*, London: Kogan Page, 69–85.
- McLellan, H. (1996) 'Situated learning: Multiple perspectives' in McLellan, H., ed. *Situated learning perspectives*, Englewood Cliffs, NJ: Educational Technology Publications, 5–17.
- McNamara, O., Jones, M. and Murray, J. (2014a) 'Framing workplace learning' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 1–27.
- McNamara, O. and Murray, J. (2013) 'The School Direct programme and its implications for research-informed teacher education and teacher educators' in Florian, L. and Pantic, N., eds., *Learning to Teach Part 1: Exploring the history and role of higher education in teacher education*, York: Higher Education Academy, 10–19.
- McNamara, O., Murray, J. and Jones, M. (2014b) 'Workplace learning in pre-service teacher education: An English case study' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 183–205.
- Merriam, S. and Associates (2002) *Qualitative research in practice: Examples for discussion and analysis*, San Francisco, CA: Jossey-Bass.

- Merriam, S. and Tisdell, E. (2016) *Qualitative research: A guide to design and implementation*, 4th ed., San Francisco, CA: Jossey-Bass.
- Mewborn, D. S. and Tyminski, A. M. (2006) 'Lortie's apprenticeship of observation revisited', *For the Learning of Mathematics*, 26(3), 30–33.
- Meyers, B., Fisher, T., Alicea, M. and Bloxson, K. (2014) 'Unfinishedness: Striving for a viable partnership between TFA and its partner university', *Teachers College Record*, 116, 1–32.
- Million+ (2013) *Who should train the teachers? The future of teacher education in England. Report of a Roundtable*, London: Million+.
- Mohler, P., Pennell, B. and Hubbard, F. (2008) 'Survey documentation: Toward professional knowledge management in sample surveys' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook on survey methodology*, New York: Psychology Press, 403–420.
- Moore-Johnson, S. and Birkeland, S. (2008) 'Is fast track preparation enough? It depends' in Grossman, P. and Loeb, S., eds., *Alternative routes to teaching: Mapping the new landscape of teacher education*, Cambridge MA: Harvard University Press, 101–128.
- Mueller, C. (2012) *The impact of teacher certification programs on teacher efficacy, job satisfaction, and teacher performance: A comparison of traditional and alternative certification*", unpublished thesis Western Kentucky University.
- Muijs, D., Chapman, C. and Armstrong, P. (2012) 'Teach First: Pedagogy and outcomes. The impact of an alternative certification programme', *Journal for Educational Research Online*, 4(2), 29–64.
- Muijs, D., Chapman, C. and Armstrong, P. (2014) 'Enculturation or innovation? The pedagogical practices of teachers on an ambitious, alternative certification programme' in Ellis, V. and Orchard, J., eds., *Learning teaching from experience: Multiple perspectives and international contexts*, London: Bloomsbury, 21–45.
- Muijs, D. and Reynolds, D. (2002) 'Teachers' beliefs and behaviours: What really matters?', *Journal of Classroom Interaction*, 37(2), 3–15.
- Muijs, D. and Reynolds, D. (2011) *Effective teaching: Evidence and practice*, 3rd ed., London: Sage.

References

- Munn, P. (2008) 'Scotland' in O'Donoghue, T. and Whitehead, C., eds., *Teacher education in the English-speaking world: Past, present and future*, Charlotte, NC: Information Age Publishing, 61–73.
- Murray, J. (2013) 'Analysing the fallout in teacher education: government intervention, academic drift and the higher education 'marketplace'' in Evans, M., ed. *Teacher education and Pedagogy, Theory, policy and Practice: The Cambridge Teacher Series*, Cambridge: Cambridge University Press, 1–22.
- Murray, J., McNamara, O. and Jones, M. (2014) 'Improving workplace learning in teacher education' in McNamara, O., Murray, J. and Jones, M., eds., *Workplace learning in teacher education: International practice and policy*, New York: Springer, 293–315.
- Murshidi, R., Konting, M. M., Elias, H. and Fooi, F. S. (2006) 'Sense of efficacy among beginning teachers in Sarawak', *Teaching Education*, 17(3), 265–275.
- Nagy, C. and Wang, N. (2007) 'The alternate route teachers' transition to the classroom: Preparation, support and retention', *National Association of Secondary School Principals Bulletin*, 91(1), 98–113.
- National Audit Office (2016) 'Training new teachers HC798', [online], available: <https://www.nao.org.uk/report/training-new-teachers/> [accessed 31/7/17].
- National College for Teaching and Leadership (2014a) 'Provider ITT allocations methodology: Academic year 2014 to 2015', [online], available: <https://www.gov.uk/government/publications/provider-itt-allocations-methodology> [accessed 24/8/17].
- National College for Teaching and Leadership (2014b) 'School Direct: information for schools', [online], available: <https://www.gov.uk/government/collections/school-direct-information-for-schools> [accessed 29/3/14].
- O'Donoghue, T. and Whitehead, C. (2008a) 'A comparative analysis of teacher education across ten countries' in O'Donoghue, T. and Whitehead, C., eds., *Teacher education in the English-speaking world: Past, present and future*, Charlotte, NC: Information Age Publishing, 191–199.
- O'Donoghue, T. and Whitehead, C., eds. (2008b) *Teacher education in the English-speaking world: Past, present and future*, Charlotte, NC: Information Age Publishing.

- Oancea, A. and Orchard, J. (2012) 'The future of teacher education', *Journal of Philosophy of Education*, 46(4), 574–588.
- OECD (2011) *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, Paris: O.E.C.D. Publishing.
- OECD (2014) *Education at a glance 2014: O.E.C.D. Indicators*, Paris: O.E.C.D. Publishing.
- Olsen, B. (2008) 'How reasons for entry into the profession illuminate teacher identity development', *Teacher Education Quarterly*, 35(3), 23–40.
- Olsen, B. (2014) 'Learning from experience: A teacher–identity perspective' in Ellis, V. and Orchard, J., eds., *Learning teaching from experience: Multiple perspectives and international contexts*, London: Bloomsbury, 74–94.
- Orchard, J. and Winch, C. (2015) 'What training do teachers need? Why theory is necessary to good teaching', *IMPACT: Philosophical perspectives on education policy*, 22.
- Pajares, F. (1995) 'Self efficacy in academic settings', *The annual meeting of the American Educational Research Association*, San Francisco, CA, April 18–22 1995.
- Patrick, R. (2013) "'Don't rock the boat": Conflicting mentor and pre-service teacher narratives of professional experience', *The Australian Educational Researcher*, 40(2), 207–226.
- Patton, M. (2002) *Qualitative research and evaluation methods*, 3rd ed., Thousand Oaks, CA: Sage.
- Pelias, R. (2011) 'Writing into position: Strategies for composition and evaluation' in Denzin, D. and Lincoln, Y., eds., *The SAGE handbook of qualitative research*, 4th ed., Thousand Oaks, CA: Sage.
- Philpott, C. (2014) *Theories of professional learning: A critical guide for teacher educators*, Northwich: Critical Publishing Ltd.
- Pillen, M., Beijaard, D. and Brok, P. d. (2013) 'Tensions in beginning teachers' professional identity development, accompanying feelings and coping strategies', *European Journal of Teacher Education*, 36(3), 240–260.
- Pillow, W. (2003) 'Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodological power in qualitative research', *International Journal of Qualitative Studies in Education*, 16(2), 175–196.

References

- Polyani, M. (1964) *Personal knowledge: Towards a post-critical philosophy*, New York: Harper Torchbooks.
- Pring, R. (2004) *Philosophy of educational research*, 2nd ed., London: Continuum.
- Pring, R. (2011) 'Bring back teaching', *PPfTE presentation Moray House, University of Edinburgh* [online], available: www.teachingscotland.org.uk/education-in-scotland/scotlands-education-system/45-bring-back-teaching.aspx [accessed 8/5/14].
- Reder, L., Anderson, J. and Simon, J. (1996) 'Situated learning and education', *Educational Researcher*, 25(4), 5–11.
- Redlich-Amirav, D. and Higginbottom, G. (2014) 'New emerging technologies in qualitative research', *The Qualitative Review*, 19, How to Article 12, 1–14.
- Redmon, R. (2007) 'Impact of teacher preparation upon teacher self efficacy', *The Annual Meeting of the American Association for Teaching and Curriculum*, Cleveland, Ohio, October 5, 2007.
- Rhodes, C. and Brown, A. D. (2005) 'Writing responsibly: Narrative fiction and organization studies', *Organization*, 12(4), 467–491.
- Rhodes, D. (2017) 'Schools need 68,000 extra BME teachers to reflect population', *BBC News*, 13 July [online], available: <http://www.bbc.co.uk/news/uk-england-40568987> [accessed 21/10/17].
- Richards, L. (2015) *Handling qualitative data: A practical guide*, Thousand Oaks, CA: Sage.
- Ritter, J. T. and Hancock, D. R. (2007) 'Exploring the relationship between certification sources, experience levels, and classroom management orientations of classroom teachers', *Teaching and Teacher Education*, 23(7), 1206–1216.
- Robertson, E. (2009) 'The epistemic aims of education' in Siegel, H., ed. *The Oxford handbook of philosophy of education*, Oxford: Oxford University Press, 11–34.
- Robson, C. (2002) *Real world research*, 2nd ed., Malden, MA: Blackwell.

- Ronfeldt, M., Schwartz, N. and Jacob, B. (2014) 'Does preservice preparation matter? Examining an old question in new ways', *Teachers College Record*, 116, 1–46.
- Rorrison, D. (2011) 'Border crossings in practicum research' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 19–44.
- Ross, J. (1992) 'Teacher efficacy and the effect of coaching on student achievement', *Canadian Journal of Education*, 17(1), 51–65.
- Roth, R. A. (1994) 'The university can't train teachers? Transformation of a profession', *Journal of Teacher Education*, 45(4), 261–268.
- Ryan, P. and Unwin, L. (2001) 'Apprenticeship in the British "Training Market"', *National Institute Economic Review*, 178(1), 99–114.
- Sahlberg, P. (2012) 'The most wanted: Teachers and teacher education' in Darling–Hammond, L. and Liebermann, A., eds., *Teacher education around the world: Changing policies and practices*, Abingdon: Routledge, 1–21.
- Saumure, K. and Given, L. (2009) 'Using Skype as a research tool: Lessons learned from qualitative interviews with distance students in a teacher–librarianship program', [online], available: www.lrsv.umd.edu/abstracts/Saumure_Given.pdf [accessed 28/10/2015].
- Savin–Baden, M. and Major, C. H. (2013) *Qualitative research: The essential guide to theory and practice*, Abingdon: Routledge.
- Schon, D. (1983) *The reflective practitioner*, New York: Basic Books.
- Schwandt, T. (1997) *Qualitative inquiry: A dictionary of terms*, Thousand Oaks, CA: Sage.
- Schwarz, N., Knauper, B., Oyserman, D. and Stich, C. (2008) 'The psychology of asking questions' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook of survey methodology*, New York: Psychology Press, 18–34.
- Settlage, J., Southerland, S. A., Smith, L. K. and Ceglie, R. (2009) 'Constructing a doubt–free teaching self: Self–efficacy, teacher identity, and science instruction within diverse settings', *Journal of Research in Science Teaching*, 46(1), 102–125.

References

- Shaughnessy, M. (2004) 'An interview with Anita Woolfolk: The educational psychology of teacher efficacy', *Educational Psychology Review*, 16(2), 153–176.
- Sheldon, N. (2011) 'Notes on Teacher Training 1960s to present day', [online], available: <http://www.history.ac.uk/history-in-education/project-papers/topics.html> [accessed 28/02/2014].
- Shulman, L. (1986) 'Those who understand: Knowledge growth in teaching', *Educational Researcher*, 15(2), 4–14.
- Shulman, L. (1987) 'Knowledge and teaching: Foundations of the new reform', *Harvard Educational Review*, 57(1), 1–21.
- Singer, E. (2008) 'Ethical issues in surveys' in De Leeuw, E., Hox, J. and Dillman, D., eds., *International handbook of survey methodology*, New York: Psychology Press, 78–96.
- Sjølie, E. (2014) 'The role of theory in teacher education: Reconsidered from a student teacher perspective', *Journal of Curriculum Studies*, 46(6), 729–750.
- Skaalvik, E. and Skaalvik, S. (2010) 'Teacher self-efficacy and teacher burnout: A study of relations', *Teaching & Teacher Education*, 26, 1059–1069.
- Sloat, E., Sherman, A., Christou, T., Hirschhorn, M., Kristmanson, P., Lemisko, L. and Sears, A. (2014) 'Restoring higher education's mission in teacher education: A global challenge from a Canadian perspective' in Ellis, V. and Orchard, J., eds., *Learning teaching from experience: Multiple perspectives and international contexts*, London: Bloomsbury, 143–158.
- Slotnick, R. and Janesick, V. (2011) 'Conversations on method: Deconstructing policy through the researcher reflective journal', *The Qualitative Report*, 16(5), 1352–60.
- Smith, C. and Elger, T. (2014) 'Critical realism and interviewing subjects' in Edwards, P., O'Mahoney, J. and Vincent, S., eds., *Studying organisations using critical realism*, Oxford: Oxford University Press, 109–131.
- Smith, E. R. and Avetisian, V. (2011) 'Learning to teach with two mentors: Revisiting the “Two-Worlds Pitfall” in student teaching', *The Teacher Educator*, 46(4), 335–354.
- Smith, K. and Hodson, E. (2010) 'Theorising practice in initial teacher education', *Journal of Education for Teaching*, 36(3), 259–275.

- Sobh, R. and Perry, C. (2006) 'Research design and data analysis in realism research', *European Journal of Marketing*, 40(11/12), 1194–1209.
- Solomon, J. (2009) 'The Boston Teacher Residency: District-based teacher education', *Journal of Teacher Education*, 60(5), 478–488.
- Symonds, J. and Gorard, S. (2010) 'Death of mixed methods? Or the rebirth of research as a craft', *Evaluation & Research in Education*, 23(2), 121–136.
- Taggart, G. and Wilson, A. (2005) *Promoting reflective thinking in teachers: 50 action strategies*, Thousand Oaks, CA: Corwin.
- Tatto, M. (2013) 'The role of research in international policy and Practice in teacher education', [online], available: <http://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Paper-2-International-Policy-and-Practice-in-Teacher-Education.pdf> [accessed 27/7/17].
- Teach for America (2017) 'Teach for all', [online], available: <https://www.teachforamerica.org/about-us/teach-for-all> [accessed 5/11/17].
- Télliez, K. (2007) 'Have conceptual reforms (and one anti-reform) in preservice teacher education improved the education of multicultural, multilingual children and youth?', *Teachers and Teaching*, 13(6), 543–564.
- Thomas, L. and Beauchamp, C. (2007) 'Learning to live well as teachers in a changing world: Insights into developing a professional identity in teacher education', *The Journal of Educational Thought*, 41(3), 229–243.
- Thomson, P. (2000) 'The sorcery of apprenticeships and new/old brooms: Thinking about theory, practice, the practicum and change', *Teaching Education*, 11(1), 67–74.
- Tigchelaar, A., Brouwer, N. and Korthagen, F. (2008) 'Crossing horizons: Continuity and change during second-career teachers' entry into teaching', *Teaching and Teacher Education*, 24(6), 1530–1550.
- Tom, A. (1997) *Redesigning teacher education*, Albany, NY: University of New York Press.
- Tomlinson, P. (1999a) 'Conscious reflection and implicit learning in teacher preparation. Part 1: Recent light on an old issue', *Oxford Review of Education*, 25(3), 405–424.

References

- Tomlinson, P. (1999b) 'Conscious reflection and implicit learning in teacher preparation. Part II: Implications for a balanced approach', *Oxford Review of Education*, 25(4), 533–544.
- Tournaki, N., Lyublinskaya, I. and Carolan, B. V. (2009) 'Pathways to teacher certification: Does it really matter when it comes to efficacy and effectiveness?', *Action in Teacher Education*, 30(4), 96–109.
- Tracy, S. J. (2010) 'Qualitative quality: Eight "Big-Tent" criteria for excellent qualitative research', *Qualitative Inquiry*, 16(10), 837–851.
- Tripp, S. (1996) 'Theories, traditions, and situated learning' in McLellan, H., ed. *Situated learning perspectives*, Englewood Cliffs, NJ: Educational Technology Publications, 155–166.
- Tschannen–Moran, M. and Woolfolk Hoy, A. (2001) 'Teacher efficacy: Capturing an elusive construct', *Teaching & Teacher Education*, 17, 783–805.
- Tschannen–Moran, M. and Woolfolk Hoy, A. (2014) 'Directions for scoring the teachers' sense of efficacy scale', [online], available: <http://u.osu.edu/hoy.17/files/2014/09/TSES-+-scoring-zted8m.pdf> [accessed 1/1/17].
- Tschannen–Moran, M., Woolfolk Hoy, A. and Hoy, W. (1998) 'Teacher efficacy: Its meaning and measure', *Review of Educational Research*, 68(2), 202–248.
- UNESCO (2011) *Education counts: towards the millenium development goals*, Paris: UNESCO.
- United Nations (2014) 'United Nations millenium development goals', [online], available: <http://www.un.org/millenniumgoals/> [accessed 30/10/2014].
- Universities UK (2014) *The impact of initial teacher training reforms on English Higher Education Insitutions*, London: Universities UK.
- Unruh, L. and Holt, J. (2010) 'First–year teaching experiences: Are they different for traditionally versus alternatively certified teachers?', *Action in Teacher Education*, 32(3), 3–14.
- Valencia, S., Martin, S., Place, N. and Grossman, P. (2009) 'Complex interactions in student teaching: Lost opportunities for learning', *Journal of Teacher Education*, 60(3), 304–322.

- van de Ven, P. (2011) 'Reflections from a 'dutch' perspective' in Mattson, M., Vidar Eilertson, T. and Rorrison, D., eds., *A practicum turn in teacher education*, Rotterdam: Sense, 189–209.
- Van Driel, J. H., Jong, O. D. and Verloop, N. (2002) 'The development of preservice chemistry teachers' pedagogical content knowledge', *Science Education*, 86(4), 572–590.
- van Manen, M. (1977) 'Linking ways of knowing with ways of being practical', *Curriculum Inquiry*, 6(3), 205–228.
- Varghese, M., Morgan, B., Johnston, B. and Johnson, K. A. (2005) 'Theorizing language teacher identity: Three perspectives and beyond', *Journal of Language, Identity & Education*, 4(1), 21–44.
- Wallis, P. and Minns, C. (2012) 'Rules and reality: Quantifying the practice of apprenticeship in early modern England', *Economic History Review*, 65(2), 556–579.
- Wang, H., Hall, N. C. and Rahimi, S. (2015) 'Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions', *Teaching and Teacher Education*, 47, 120–130.
- Waring, M. and Evans, C. (2015) *Understanding pedagogy: Developing a critical approach to teaching and learning*, Abingdon: Routledge.
- Wayne, A. and Youngs, P. (2003) 'Teacher characteristics and student achievement gains: A review', *Review of Educational Research*, 73(1), 89–122.
- Wenger, E. (1998) *Communities of practice: Learning, meaning and identity*, Cambridge: Cambridge University Press.
- Wenger, E. (2009) 'A social theory of learning' in Illeris, K., ed. *Contemporary learning theories*, London: Routledge, 209–218.
- Wenger, E., McDermott, R. and Synder, W. (2002) *Cultivating communities of practice: A guide to cultivating knowledge*, Boston: Harvard Business School Publishing.
- White, E. (2013) 'Exploring the professional development needs of new teacher educators situated solely in school: Pedagogical knowledge and professional identity', *Professional Development in Education*, 39(1), 82–98.

References

- Whittaker, F. (2017) 'Confirmed: Teacher apprentices will be paid on unqualified scale', *Schoolsweek 19 October* [online], available: <https://schoolsweek.co.uk/confirmed-teacher-apprentices-will-be-paid-on-unqualified-scale/> [accessed 21/10/17].
- Whitty, G. (2014) 'Recent developments in teacher training and their consequences for the 'University Project' in education', *Oxford Review of Education*, 40(4), 466–481.
- Williamson, P., Apedoe, X. and Thomas, C. (2016) 'Context as content in urban teacher education: Learning to teach in and for San Francisco', *Urban Education*, 51(10), 1170–1197.
- Wilson, S. M. (2014) 'Innovation and the Evolving System of U.S. Teacher Preparation', *Theory Into Practice*, 53(3), 183–195.
- Winch, C. (2010) 'Vocational education, knowing how and intelligence concepts', *Journal of Philosophy of Education*, 44(4), 551–567.
- Winch, C. (2012) 'For philosophy of education in teacher education', *Oxford Review of Education*, 38(3), 305–322.
- Winch, C. (2013) 'Three different conceptions of know-how and their relevance to professional and vocational education', *Journal of Philosophy of Education*, 47(2), 281–298.
- Winch, C., Oancea, A. and Orchard, J. (2013) *The Contribution of Educational Research to Teachers' Professional Learning Philosophical Understanding. Paper submitted to the BERA-RSA Inquiry*, London: BERA/RSA.
- Winn, W. (1996) 'Why I don't want to be an expert sitar player' in McLellan, H., ed. *Situated learning perspectives*, Englewood Cliffs, NJ: Educational Technology Publications, 175–182.
- Wise, A., Darling-Hammond, L., McLaughlin, M. and Bernstein, H. (1984) *Teacher evaluation: A study of effective practices*, Santa Monica, CA: Rand Corporation.
- Woolfolk Hoy, A. and Burke-Spero, R. (2005) 'Changes in teacher efficacy during the early years of teaching: A comparison of four measures', *Teaching and Teacher Education*, 21, 343–256.

- Wringe, C. (2012) 'Learning to teach and becoming a teacher: Techne and phronesis', *Philosophy of Education Society of Great Britain Annual Conference*, New College, Oxford, 30 March – 1 April 2012.
- Wringe, C. (2015) 'Learning to teach and becoming a teacher: Techne and phronesis' in Heibronn, R. and Foreman–Peck, L., eds., *Philosophical perspectives on teacher education*, Chichester: Wiley–Blackwell, 23–37.
- Zeichner, K. (2016) 'Independent teacher education programs: apocryphal claims, illustory evidence', [online], available: <http://nepc.colorado.edu/publication/teacher-education> [accessed 19/7/17].
- Zeichner, K. and Bier, M. (2015) 'Opportunities and pitfalls in the turn toward clinical experience in U.S. teacher education' in Hollins, E., ed. *Rethinking field experiences in preservice teacher preparation: Meeting new challenges for accountability*, New York: Routledge, 20–46.
- Zeichner, K. and Ndimande, B. (2008) 'Contradictions and tensions in the place of teachers in educational reform: Reflections on teacher preparation in the USA and Namibia', *Teachers and Teaching*, 14(4), 331–343.