

# **Organisational structures, management processes and conceptual framework in initial teacher education: a systematic review**

Review conducted working with Initial Teacher Education

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Technical report written by Liz Bills, Mary Briggs, Ann Browne, Helena Gillespie, John Gordon, Chris Husbands, Ann Shreeve, Caroline Still, Peter Swatton

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EPPI-Centre  
Social Science Research Unit  
Institute of Education  
University of London

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# **Organisational structures, management processes and conceptual framework in initial teacher education: a systematic review**

## **TECHNICAL REPORT**

Review conducted working with ITE

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The results of this systematic review are available in four formats. See over page for details.

The results of this systematic review are available in four formats:

**SUMMARY**

Explains the purpose of the review and the main messages from the research evidence

**REPORT**

Describes the background and the findings of the review(s) but without full technical details of the methods used

**TECHNICAL  
REPORT**

Includes the background, main findings, and full technical details of the review

**DATABASES**

Access to codings describing each research study included in the review

These can be downloaded or accessed at <http://eppi.ioe.ac.uk/reel/>

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## **List of abbreviations**

BEd	Bachelor of Education
CTE	Career and technical education
DfES	Department for Education and Skills
ESRC	Economic and Social Research Council
GTC	General Teaching Council
HEI	Higher education institution
HMI	Her Majesty's Inspectorate for Schools
ITE	Initial teacher education
ITT	Initial teacher training
LEA	Local education authority
MOTE	Modes of teacher education
OFSTED	Office for Standards in Education
PDS	Professional development school
PGCE	Postgraduate Certificate of Education
QTS	Qualified teacher status
TDA	Training and Development Agency
WoE	Weight of evidence

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# Abstract

## What do we want to know?

The Review Group wished to determine what evidence there is that the quality of initial teacher education (ITE) is influenced by its organisational structure, management processes and conceptual framework.

## Who wants to know and why?

The review aims to support thinking and development in ITE at course, institutional and policy levels. By focusing on the evidential basis for relationships between structural components of ITE, it seeks to provide a starting point for informed action in terms of national and institutional policy. The report will be of interest to policy-makers, initial teacher educators (school- and college-based), and trainee teachers.

## What did we find?

Of the 18 studies reviewed in depth, only five were considered to offer medium weight of evidence (WoE), and none offered high WoE. They were fairly evenly balanced between primary and secondary phases of ITE, and the majority were from the United States. The five medium-weight studies suggested the following:

- One study found no clear evidence that PGCE or BEd resulted in better quality teachers. Another found that undergraduate students were more concerned with children's learning, while postgraduates thought more about lesson planning and classroom management. A third study suggested that teachers from alternative teacher certification programmes felt least prepared in terms of pedagogy, but most prepared in terms of subject matter.
- Teacher trainees benefited from increased time in school and from mentoring.

Each of these studies was considered to be exploratory, so the conclusions are tentative.

## What are the implications?

- There is a paucity of research in the area.
- Although increased time spent in school appears to be beneficial, there is no firm evidence on common issues and little agreement on issues at the level at which conclusions would be useful to providers or policy-makers.
- Future research needs the development of more refined databases, measures and methods, as well as development in the conceptualisation of quality.

## How did we get these results?

A systematic review found 53 relevant studies, which were mapped. Of these, 18 were categorised as evaluations or explorations of relationships, and they were reviewed in depth.

## Where to find further information

The reference for this review is:

Bills, L., Briggs, M., Browne, A., Gillespie, H., Gordon, J., Husbands, C., Shreeve, A., Still, C. & Swatton, P. (2007) Structures, management and process in initial teacher education: a systematic review. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

The review can be downloaded from <http://eppi.ioe.ac.uk/reel/>

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## CHAPTER ONE

# Background

This chapter outlines the theoretical, policy, practice and research background to the systematic review, including details of the authors and other users of the review, and the development and aims of the review question.

This review has been written to support thinking and development in initial teacher education (ITE) at course, institutional and policy levels. By focusing on the evidential basis for relationships between structural components of ITE, it seeks to provide a starting point for informed action in terms of national and institutional policy. It draws on refereed research papers which explore inter-relationships between the quality of ITE and its organisational structure, management processes and conceptual framework, as well as unpublished literature, including higher degree dissertations. It is written after a period of turbulence in teacher education developments nationally and internationally, turbulence which has been characterised by some broad themes.

The first of these themes is a concern about the location of ITE, where debate has centred on the relationship between the school and the academy in terms of curriculum, control and management of ITE; linked to this is a concern about the skill-set, effectiveness and staff development of those charged with responsibilities in ITE, whether tutors located in higher education or mentors and teachers based in schools. The second theme has been a movement towards performance-based assessment, typically drawing on standards methodologies. The third is a concern about the underpinning knowledge base for students

in initial training. This has been debated in terms of the balance between subject-based knowledge - characterised as curriculum knowledge or pedagogic content knowledge (Shulman, 1987) - and 'generic' professional or craft knowledge of teaching (McIntyre, 1988). These concerns are set more generally against debate about the extent to which initial teacher education is essentially geared towards preparation for the immediate challenges of successful classroom performance, laying foundations for longer-term professional learning, or articulating radical critiques of the structure and organisation of education and schooling as social practices (Schostak 1996; Wilkin, 1996). These background debates are often interconnected.

### **1.1 Aims and rationale for current review**

#### **1.1.1 Aims**

This review is concerned with analysing the current research and knowledge base related to the relationship between the organisational structure, management processes and conceptual framework (for the purposes of this review referred to collectively as 'structures') for initial teacher education (ITE) and its quality. At a time of rapid systemic reform in education systems across the world, the quality of ITE has been a matter of pressing public and policy concern, which has been translated into specific policy reforms in a variety of ways. At the same time, researchers have been concerned with exploring the underlying models of teacher development and teacher education which are associated with particular reform programmes at state, regional or institutional level. The parameters of this reform are broad. They can conveniently be viewed in terms of the inputs to teacher education,



the processes of teacher education, and the outputs of teacher education.

In terms of inputs, reforms have generally been concerned with the relationship between teacher knowledge and teacher development, between reflection and teacher development, and the elaboration of models of teacher effectiveness based on observed inference from practice as a basis for constructing curriculum reforms (e.g. Calderhead and Gates, 1993; Muijs and Reynolds, 2005; Shulman, 1987). Thus, interest has been expressed in auditing the knowledge of new teachers and developing curriculum programmes to improve knowledge of both new teachers and teacher trainers and educators. Some reforms have focused on the managerial structures underpinning teacher education. In some settings, reform has been associated with the closer involvement of schools in the delivery and management of teacher education, while, elsewhere, attempts to enhance quality have been associated with moving teacher education into mainstream university provision. These different models have been associated with quite different managerial structures, and sharply contrasting roles and responsibilities. In other settings, reform and development have focused on assessment and assessment models in teacher education. Particularly influential have been concerns with competency-based assessment as opposed to knowledge-based assessment, or with the development of external inspection and scrutiny of processes and inputs. In different places, these various developments have interacted in a variety of ways: for example, in England, reforms have shifted the location of teacher education more into schools and at the same time have imposed a competency based methodology on the system, underpinning both with the extension of external inspection. The complexity of these policy developments, which are often accompanied by contrasting paces of change at provider level, make it difficult to separate the impact of different developments and to unpack the inter-relationships between inputs, processes, outputs and quality.

### **1.1.2 Rationale**

Before undertaking any new research, policy or practice, it is advisable first to be informed about the research, policies and practices that already exist in relation to the topic. Such information may be known by experts in the field or may have already been summarised within a literature review, but these have not traditionally been based upon systematic methods to ensure substantial and unbiased searching and processing of potentially relevant studies. For this reason, this review was allied to the EPPI-Centre review procedures. Systematic reviews are also in alignment with the general move in the UK towards evidence-informed policy and practice. In systematising the review, the review team used explicit and transparent methods, and provided a systematic map of research studies located. The review is therefore accountable,

replicable and updateable, and involves users.

## **1.2 Definitional and conceptual issues**

This review explores work in initial teacher education. By initial teacher education, we refer to pre-service/pre-employment professional education and training; that is, programmes of initial teacher education which lead explicitly to accreditation and certification. In some polities, the relationship between academic qualification and professional accreditation is confused and poorly articulated, but the essential concern here is with professional education and training in the context of teaching and teacher development. ‘Teacher education’, however, is not a conceptually clear structure. In some cases, there is an explicit concern with formal arrangements which address skill and competence development; in others, skills and competence development are implicit in, or embedded, in academic programmes. For the purposes of this review, we will be concerned with programmes which are explicitly concerned with the certification of teaching, or career entry programmes.

## **1.3 Policy and practice background**

Policy development in UK teacher education has been very rapid, particularly since 1984, both at national and institutional levels. Husbands (1997) characterised two overlapping cycles of reform in school-based teacher education: a political history and a professional history. Much of the evidence on institutional development was collected in the ESRC Modes of Teacher Education (MOTE) study (Furlong et al., 1999), and is characterised by a general commitment to teacher education models based on reflective practice in school-based settings. The concern to develop school-based and partnership models of teacher education derived from increasing research evidence during the 1970s and 1980s that higher-education-based models of teacher education were generally ineffective in laying the long-term foundations for sustained professional reflection and development. This practitioner development was cast against policy development, which increased the role of national government in setting detailed requirements for ITE. In 1984, government took power to accredit teacher education providers, and in 1989 developed detailed criteria for the content and structure of publicly-funded teacher education programmes. In 1992, the 1989 circular was tightened and providers of ITE were required to develop formal partnerships for initial teacher education with schools. Two years later, government established the policy framework for programmes of teacher education from which higher education was excluded, although these ‘school-centred’ initial teaching training (ITT) programmes were relatively slow to develop. In 1994, a new government agency to oversee teacher education was established, and, under its auspices, new assessment and accreditation criteria were developed in 1998 and again in 2001. These reforms emphasised some

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common features: a concern with competency-based assessment and an enhanced role for schools in initial teacher education: in policy terms, working with the broad grain of research. The reforms were accompanied from 1995 by a compliance model of inspection which, turned out to be a highly effective tool for the management and restructuring of teacher education provision since it was linked to the funding regime which underpinned ITE.

### 1.4 Research background

The research background in the UK is defined by two large-scale studies and two significant research strands. Furlong et al. (1988) completed an ESRC funded study of 'The role of the school in initial teacher training', which explored the conceptualisation of school-based work in initial teacher training in four programmes of teacher training. The study provided an overview and conceptual clarification of the limits and potential of school-based teacher education in terms of the types of knowledge typically deployed by higher-education and school-based teacher educators (Booth et al., 1990; Furlong and Smith, 1996). Furlong et al. in the modes of teacher education (MOTE) study (1999) extended the concern of the 1989 work in terms of the conceptions of teacher education, which were developing in England and Wales. They devised what they called a 'topography' of ITE, charting the tensions between the standards-methodology which was underpinning school-based teacher education and the reflective practitioner model, which was broadly current in articulated aims for programmes. Alongside this, two important research traditions have developed. One - particularly associated with the work of McIntyre (1988), Hagger (1992) and Pendry (1990, 1994) - is concerned with exploring the nature of the knowledge bases for teacher development in school-based teacher education, particularly how student teacher development is related to the ways in which professional knowledge is mediated by tutors and mentors. This tradition has spawned considerable concern with the work of mentors and with the ways in which mentors' contribution to teacher education is developed and articulated. The second significant research strand is with the place of the school in teacher education and has often been associated with small scale descriptive studies of particular programmes of teacher education in terms of their aims and management (Hake, 1993; Williams, 1993).

In the USA, a stronger tradition of research, focusing on measurable outcomes of ITE, has resulted in a series of research review studies on effective ITE. These have addressed a range of broad questions of policy interest, a subset of which bears on our interest in structures, processes and conceptual framework. Two of these (Wideen et al., 1998; Wilson et al., 2001) have been particularly influential in the design of our review. Each of these reviews is concerned with teacher preparation very generally and does not have a particular focus on management, structures or organisation; hence,

neither was included in our review. Nevertheless, their conclusions about the nature and extent of the research evidence available are very relevant to our work.

Wilson et al. (2001) undertook a research review which was confined to empirical research meeting their criteria for rigour and undertaken in the USA. It addressed the type of preparation needed in terms of subject matter, pedagogic knowledge and student teaching practice. The review also looked at means of programme improvement and alternative certification practices. An overall conclusion of this review is that 'the research base concerning teacher preparation is relatively thin. The studies we found, however, suggest that good research can be done, but that it will take the development of more refined databases, measures, and methods, as well as complementary research designs that collect both qualitative and quantitative data' (p ii).

This summary finding is reflected at the more detailed level in conclusions that the relationship between subject knowledge and teacher effectiveness is not well understood, and that there is a wide variety of practice described as 'pedagogical coursework', with no firm evidence about its quality. Since the nature and quality of these elements of teacher preparation programmes is poorly understood, studies concerning the relationship between these elements, which would be of relevance to our review, are likely to be few and weakly conceptualised.

In relation to 'clinical training' or 'student teaching', the Wilson review concludes that this component of teacher preparation has the potential to be extremely powerful in shaping beliefs and practices, but is often poorly connected to the theoretical or higher education institute (HEI)-based elements of the programme. The relationship between this element of the programme and others is likely to be an area of programme structure which will be better represented in published research than most. However, our review will include those studies which focus on this relationship and not include papers whose main focus is on the organisation and management of student teaching.

The Wilson review looked for evidence about the impact of state and national policy on teacher preparation, asking particularly about the effect of improvement programmes; however, they found the evidence to be thin. The move in the USA, since the early 1990s, to provide alternatives to undergraduate programmes of teacher preparation has given rise to a great many small scale research studies, which compare these alternative programmes with traditional pre-service programmes. The wide variety in structure and organisation of the alternative programmes, and the local nature of most of the evaluation projects means that these studies form only the beginning of a serious enquiry into the relationship between structure and quality in ITE. Wilson et al. conclude

that ‘Future research will need to include more detailed descriptions of the various alternative route program structures and content before conclusions can be drawn about characteristics that make for high-quality programs’ (Wilson et al., 2001, p iii).

Wideen et al. (1998) undertook a review of papers addressing perceptions and developing beliefs and practices of beginning teachers related to pre-service education. As a result, they characterised three kinds of teacher preparation programmes and corresponding approaches to studying teacher preparation:

- *Positivist tradition*: This gives rise to traditional programmes of teacher education driven by a model of teacher learning in which the university provides the knowledge base for teaching, the school supplies the context for practice and the individual student is responsible for putting these together.
- *Progressive tradition*: Research in this tradition centres around studying what beginning teachers know and believe, and how they come to know and believe it. The reviewers found that there is often a tension reported between ‘progressive’ course elements and traditional programmes.
- *Social critique*: This arises from a particular stance (e.g. feminist, multicultural) in which the ‘givens’ of teacher education are questioned.

Wideen et al. decided to include only papers based on primary data, and included 93 studies in their review. They were, however, critical of the reporting in many cases, finding it difficult to judge the trustworthiness of the findings because there was insufficient detail about data collection and analysis.

The review highlights a general lack of impact of teacher preparation programmes on new teachers’ beliefs. Programmes which were more successful in this respect featured systematic and consistent long-term support in a collaborative setting. Thus, although the studies reviewed in most cases did not set out to draw conclusions about the structures of programmes, the combined weight of the studies reviewed points to a generalisation which is very much related to the structure of the programme. This points to two difficulties which face us in undertaking the review. In the first place, the aspects of ITE which we are interested in are, by their nature, large scale: they concern the way in which a programme is designed and managed, rather than features of individual teaching approaches, assessment mechanisms, etc. These issues are difficult to address through small scale empirical studies, which are much more numerous than large scale empirical studies. Secondly, an individual study, but still more so, evidence gathered from a number of studies may draw conclusions related to the structure of an ITE programme, although it did not set out to study structural issues. Both these difficulties, in different ways, may mean that

locating the studies which provide evidence for our review will not be straightforward.

## 1.5 Authors, funders and other users of the review

The authors of the review are named at the beginning of the report. Ann Shreeve has worked as a teacher, local authority adviser, inspector and researcher, and has a particular interest in promoting the use of research and evidence in education. Each of the other authors has research expertise in education and is an experienced tutor for initial teacher education with responsibility for development and management of ITE programmes.

The review has been funded by the Training and Development Agency (TDA), with contributions from the institutions involved via core institutional research funding from the Higher Education Funding Council for England.

Guidance on the direction of the review has been provided by representatives of the TDA and by other review teams working in similar areas. The review users are expected to be ITE tutors and managers as well as the TDA.

## 1.6 Review questions

The review question agreed by the Review Team is as follows:

*What evidence is there that the quality of ITE is influenced by its organisational structure, management processes and conceptual framework?*

### 1.6.1 Definitions

The definitions of the key components of the question are outlined below.

#### *Evidence*

For the purposes of this review, we have looked for evidence in research publications in academic literature and higher degree dissertations. Through our search and screening procedures, we have aimed to identify only those reports which demonstrably meet standards of procedure and reporting which can command trust in their conclusions.

#### *Quality*

‘Quality’ is a contested educational concept (Elliott, 1993). This is particularly so in the case of ITE, where, Wideen et al. (1998) argue, research consistently highlights differences in expectation between student teachers and their tutors. The notion of ‘quality’ on which this review is based therefore needs to reflect the perspectives of different ‘stakeholders’. Wilson et al. (2001) focus on student outcomes and teacher performance as

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measures of the quality of teacher preparation, but recognise that the studies available to them rarely use these kinds of measures in a rigorous way. In the first instance, we wish to define very broadly what we mean by quality, so that as many studies as possible are included.

In this report, therefore, 'quality' is used in the following four ways:

- The first is an internal and largely self-referential view of quality, and relates to the extent to which ITE is found to conform to internal, provider-defined measures of quality in terms of self-evaluation processes.
- The second is a consumer-defined view of quality and relates to the extent to which there is evidence from stakeholders that ITE provision meets stakeholder expectations. Stakeholders in this sense are student teachers who have experienced the ITE whose quality is being interrogated, schools and teachers who employ new students, and managers in ITE institutions.
- The third meaning is a compliance model of quality and relates to the extent to which ITE meets external, normally funder-defined expectations of delivery. We also include in this category measures of quality which are based on judgements of graduates' teaching quality against criteria derived from statutory or research-based instruments.

- The fourth meaning is an interpretation of quality as consistency or conceptual coherence. In other words, one criterion for judging quality is the extent to which the programme is consistent with the conceptual framework that underpins it. This judgement may be made by providers themselves or by outsiders.

### *Organisational structure*

By organisational structures, we refer to the form which ITE takes, its location in higher education or schools, its length, the balance and relationship between different elements, and the relationship between subject based and general professional work.

### *Management processes*

By management processes, we refer to the structures which operationalise the conceptual framework in the organisational structure, including roles and responsibilities, and methods and forms of selection and assessment.

### *Conceptual framework*

By conceptual framework, we refer to the underlying model of teaching and teacher education which is deployed in ITE. This will be exemplified in programme aims and definitions.

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## CHAPTER TWO

# Methods used in the review

This chapter details each stage of the review to ensure that it is accountable, replicable and updateable.

### 2.1 User involvement

#### 2.1.1 Approach and rationale

To be of interest to the ITE community, on completion the review needed to address questions that are relevant to the decisions that users want to make. It was therefore important that users were able to influence the formation of the review question and the search strategy.

#### 2.1.2 Methods used

There are a number of audiences likely to be interested in the outcomes of this review, including ITE course tutors and leaders, institutional managers and ITE policy-makers. The Review Team itself includes staff from university departments of Education with an interest in the management of ITE at all levels from individual course leaders to institutional managers. The review was commissioned by the TDA, which plays a key role in ITE policy making for England and Wales. A member of staff from the agency acted as advisor throughout the review process.

### 2.2 Identifying and describing studies

#### 2.2.1 Defining relevant studies: inclusion and exclusion criteria

To ensure that only papers focusing on the review question were selected for mapping, an explicit list of inclusion and exclusion criteria were developed to exclude inappropriate papers. No geographical limitations were placed on the location of studies.

##### 1. Date

- Included: Papers that were published (or unpublished but in the public domain) after 1984

##### 2. Language

- Included: Papers written in English

##### 3. Focus on teacher education

- Included: Papers that focused on the education of teachers

##### 4. Focus on initial teacher education

- Included: Papers focusing on initial/pre-service teacher education

##### 5. Age range and institutional setting of pupils taught

- Included: Papers focusing on education of teachers of school pupils in the 5-19 age range

##### 6. Focus on quality

- Included: Papers focusing on the quality of initial teacher education

##### 7. Focus on the role of tutors and mentors in ITE

- Included: Papers focusing on the discharge of responsibilities by tutors and/or mentors at course or team level
- Excluded: Papers that focused on the roles adopted by individual tutors and mentors rather than on roles defined at course or team level

##### 8. Focus on the conceptual framework for ITE

- Included: Papers focusing on the conceptual framework for ITE as expressed through the

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programme aims, definitions and design

- Excluded: Papers that focused mainly on the outworking of the conceptual framework through content, curriculum, teaching methods or assessment

### 9. Focus on structural aspects of ITE

- Included: Papers focusing on the organisational structure or management processes for ITE

### 10. Focused on partnership in ITE

- Included: Papers focusing mainly on the organisation and management of partnerships between schools and providers for initial teacher education

### 11. Focus on quality in ITE

- Included: Papers focusing mainly on the quality of initial teacher education provision
- Excluded: Papers that focused mainly on methods of quality assurance, inspection or evaluation of ITE provision rather than on the provision itself

### 12. Duplicates

- Excluded: Papers that were duplicates

### 13. Digests

- Excluded: Papers that were digests from the ERIC database

Further details of the inclusion and exclusion criteria can be found in Appendix 2.1.

## 2.2.2 Identification of potential studies: search strategy

Searches were undertaken using the following electronic bibliographic databases:

Ask ERIC, ERIC and BEI via BIDS Education, Web of Knowledge and PsycINFO.

The search strategies used are given in Appendix 2.2.

A handsearch was undertaken of the Journal for the Education of Teachers, since this journal focuses centrally on our topic. We used this handsearch as a check that our electronic search strategies were locating all relevant articles.

## 2.2.3 Screening studies: applying inclusion and exclusion criteria

Inclusion and exclusion criteria were applied to titles and abstracts. Those reports which appeared to satisfy the criteria, or for which there was insufficient information to decide, were obtained in

full. The full reports were screened again using the inclusion and exclusion criteria.

## 2.2.4 Characterising included studies

For articles remaining after the application of the inclusion and exclusion criteria, the full text articles were keyworded using the EPPI-Centre Core Keywording Strategy (EPPI-Centre, 2002a, Appendix 2.2). Additional keywords specific to the context of this review were added to those of the EPPI-Centre (Appendix 2.3). All the keyworded studies were added to the larger EPPI-Centre database, REEL, for others to access via the website.

## 2.2.5 Identifying and describing studies: quality-assurance process

### Screening

Members of the Review Team worked in pairs to trial the inclusion and exclusion criteria, and then refined these as a team.

#### (i) Screening of titles and abstracts

The first 200 abstracts were screened by a pair of team members working together and each decision was moderated by a second pair. Discrepancies were discussed by the team as a whole and agreed decisions were reached. The remainder of the abstracts were screened by an individual and moderated by a second team member.

A sample of 20 abstracts was screened again by Carole Torgerson, representing the EPPI-Centre.

#### (ii) Screening of full articles

Screening of full articles began with a moderation exercise in which pairs screened ten full articles and the full team discussed outcomes. Subsequently, full articles were screened by an individual and moderated by a second team member.

A sample of five full articles was screened again by Carole Torgerson, representing the EPPI-Centre.

### Keywording

Keywording began with a moderation exercise at a team meeting during which review-specific keywords were developed and trialled. Subsequently each paper was keyworded by two members of the Review Team working separately. Results were compared and agreed.

A sample of ten keyworded studies was moderated by Carole Torgerson, representing the EPPI-Centre.

## 2.3 In-depth review

### 2.3.1 Moving from broad characterisation (mapping) to in-depth review

At this stage, we chose to exclude descriptive studies from the in-depth review. The review methodology to which we had committed ourselves deals most easily with studies which draw their inferences from primary empirical evidence rather than arguing mainly from secondary evidence or on purely theoretical grounds. We found that the keywording distinction between descriptive and exploratory/evaluative studies matched the distinction we wished to make in the case of the set of studies we were considering. As a result, we took an amended review question for the in-depth review: 'What evidence is there from empirical research that the quality of ITE is influenced by its organisational structure, management processes and conceptual framework?'

### 2.3.2 Detailed description of studies in the in-depth review

Studies identified for inclusion in the in-depth review were data extracted using the EPPI-Centre Guidelines for extracting data (EPPI-Centre, 2002a).

### 2.3.3 Assessing quality of studies and weight of evidence for the review question

In light of the data-extraction outcomes, the quality and weight of evidence for the studies were assessed. To do this, studies were rated according to the following three dimensions:

- (A) Soundness of the study (Weight of evidence A: Taking account of all quality assessment issues, can the study findings be trusted in answering the study question(s)?

- (B) Appropriateness of the research design and analysis employed (Weight of evidence B: Appropriateness of research design and analysis for addressing the question, or sub-questions, of this specific systematic review)

- (C) Relevance to the review question of the focus of the study (Weight of evidence C: Relevance of particular focus of the study (including conceptual focus, context, sample and measures) for addressing the question or sub-questions of this specific systematic review).

On the basis of how a study was rated on each of these three, an overall weighting (D) was given; details of these decisions are given in section 4.2.

### 2.3.4 Synthesis of evidence

The aspects relevant to the research question of those studies which formed part of the in-depth review were synthesised, taking account of the relative weighting attached to them as a result of the assessment described in 2.3.3. The studies used different definitions of quality and largely considered different aspects of ITE structures, so that additive synthesis of results was mostly inappropriate. Instead, we compared and contrasted the studies, considering which aspects of the review question they addressed.

### 2.3.5 In-depth review: quality assurance process

Data extraction and assessment of weight of evidence for each study was carried out by two members of the Review Team separately using the EPPI-Centre guidelines (2002b). They compared judgements and reached a consensus. Carole Torgerson reviewed two studies to moderate the team's judgements.

## CHAPTER THREE

# Identifying and describing studies: results

This chapter details the results of the searching and screening processes and gives a descriptive map of the set of studies which remained after exclusions on the grounds of relevance to the review question.

### 3.1 Studies included from searching and screening

The search strings used to locate suitable studies are given in Appendix 2.1. The search was constructed from three basic concepts: ITE, quality and structures. The first of these was fairly easy to search for. There are a lot of different terms used to describe ITE in different cultures, but the concept itself is quite well defined and exists in a similar form across national boundaries. Hence, with some awareness of different vocabulary, we were able to be confident that we were finding articles that took ITE as their context. Quality, however, is a very poorly defined concept in the context of education generally and ITE in particular. In arriving at the final form of the review question, we considered three possible conceptions of quality that would be included within our search. These were defined in terms of internal consistency, stakeholder satisfaction and compliance (see section 1.6.1). It proved particularly difficult to design a search string that would identify studies that dealt with these concepts since vocabulary is very varied, and there is not, as yet, a convergence of terminology in the research, as opposed to the policy, literature. We tested the terms in this string by systematically omitting each to check that its inclusion was contributing some studies, and also by ensuring that test articles which we expected to locate were included in the sets of abstracts returned by the search. The terms we used to talk about the ‘structures’ aspect of our question (‘organisational structure’, ‘management processes’, ‘conceptual framework’) are open to widely different interpretations, and our search retrieved very large numbers of papers whose

focus was on aspects of ITE which did not fall within our area of interest. It is also possible that our search missed some studies which dealt with aspects of structures without using the vocabulary we included in our search string. We judged, however, that a paper which made these issues a specific focus would be likely to use these generic terms at some stage.

The search gave rise to a total of 2,088 references. Table 3.1 shows the bibliographic source of the papers located by the search and of those included in the review. No further studies were located by handsearching. Sources are listed in the order in which we searched them and papers which were later duplicated are included in the total for the database from which they were first located. There were only 14 duplicates in total. The four papers located by personal contact were suggested to us by colleagues to whom we talked about our review.

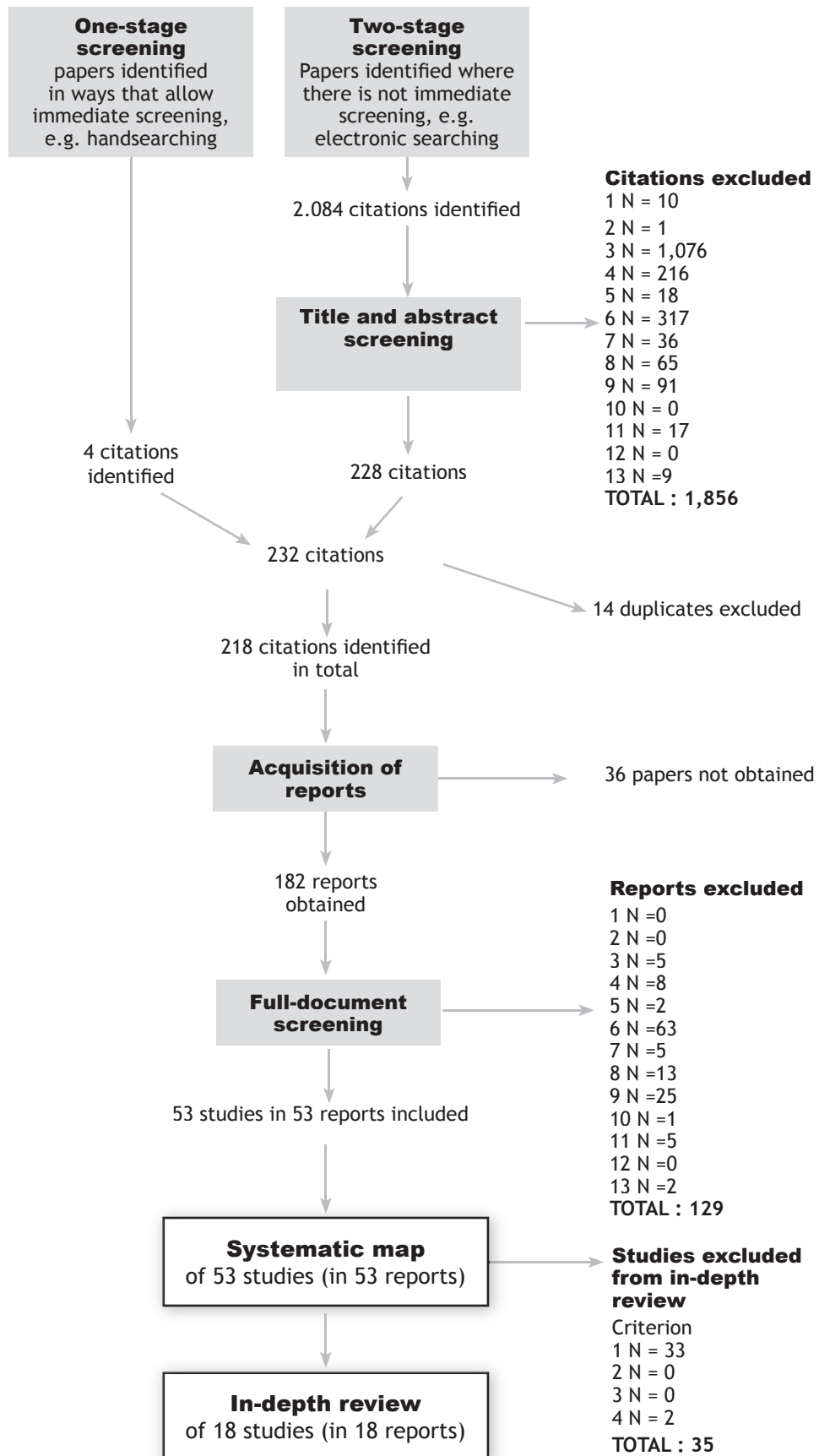
We also included three papers located by citation which were further reports of studies already included in the review.

**Table 3.1:** Origin of included papers

	Found	Included in full article screening	Included in mapping	Included in in-depth review
ERIC	1,495	193	49	15
Australian ERIC	180	17	0	0
SSCI	140	10	2	2
PyscINFO	260	3	1	0
BEI	9	5	1	1
Personal contact	4	4	0	0
<b>Total</b>	<b>2,088</b>	<b>232</b>	<b>53</b>	<b>18</b>



Figure 3.1 Filtering of papers from searching to map to synthesis



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The screening processes identified 53 studies that met our criteria for relevance. A further screening was applied to exclude those papers which offered conclusions based on argument rather than on empirical evidence. The 18 studies which remained were included in the in-depth review.

A majority of the studies identified at each stage of the review was located through ERIC. This trend is in accord with the fact that most of the studies were based in the USA.

### 3.2 Characteristics of the included studies (systematic map)

The 53 studies which met the criteria for relevance were included in the systematic map. A wide variety of types of publication was included, and almost one third of the papers were not based on an empirical study. Two-thirds of the papers were not published; these unpublished papers were mainly conference presentations or commissioned reports. Table 3.2 shows the way in which these two characteristics are linked.

**Table 3.2:** Status of study (N=53, mutually exclusive)

	Empirical	Non-empirical
Published	13	5
Unpublished	23	12

Although 53 studies were located, less than a quarter of these were papers based on empirical evidence which had the status of publication. The weight of evidence represented by these papers was not, therefore as high as the total number of papers might suggest.

The distribution of types of study represented by the papers gives a further indication of the scarcity of empirical evidence available.

**Table 3.3:** Type of study (N = 53, mutually exclusive)

Type of study	Number of studies
Description	33
Exploration of relationships	13
Exploration: naturally occurring	4
Evaluation: researcher-manipulated	1
Review: other review	2

The majority of the studies were at the descriptive level. Of the remainder, most had to be classified as ‘explorations of relationships’ rather than evaluations. This is a further indication of the nature of the existing research in this area. The vast majority of these studies are seeking to define concepts and establish possible links between them, rather than to measure effects involving well-defined variables.

Table 3.4 shows that the studies we located were distributed fairly evenly across the different phases of schooling for which student teachers were being prepared.

**Table 3.4:** Phase of ITE (N = 53, not mutually exclusive)

Phase of ITE	Number of studies
Primary	13
Secondary	10
Cross-phase	22
Other	4
Not known	6

As can be seen in Table 3.5, most studies did not pay explicit attention to the curriculum subject that the student teachers were being prepared to teach.

The distribution across time of the studies, shown

**Table 3.5:** Curriculum area and phase of ITE (N = 53, not mutually exclusive)

	General	Geography	Modern Foreign Languages	Maths	Science	Vocational	The material does not focus on curriculum issues.
Primary	0	0	0	0	1	0	11
Secondary	2	0	0	2	2	1	5
Cross-phase	3	0	1	0	1	0	17
Other	0	1	0	0	0	0	3
Not Known	0	0	0	0	0	0	6

**Table 3.5a:** Date of publication (N = 53, mutually exclusive)

Date	Number of studies
1983	0
1984	3
1985	1
1986	4
1987	3
1988	1
1989	1
1990	1
1991	1
1992	1
1993	5
1994	2
1995	4
1996	3
1997	4
1998	2
1999	3
2000	4
2001	4
2002	4
2003	1
2004	1

**Table 3.6:** Country in which the study was conducted (N = 53, not mutually exclusive)

Country	Number of studies
Australia	1
Canada	2
England and Wales	4
France	2
Lesotho	1
Netherlands	1
Scotland	4
USA	40

in Table 3.5a, reflects a period in the mid-1980s of strong interest in the nature and role of school placement as well as a steady concern with the topic in general from the mid-1990s onwards.

The majority of studies were undertaken in the USA. The small number of studies which involved more than one country were comparative studies undertaken within Europe.

Most studies were concerned with more than one educational setting and, as shown in Table 3.7, in the vast majority one setting was a higher education

**Table 3.7:** Educational setting of the study (N = 53, not mutually exclusive)

Educational settings	Number of studies
Government department	3
Higher education institution	47
Local education authority	5
Nursery school	1
Post-compulsory education institution	2
Primary school	19
Secondary school	18
Special needs school	3
Workplace	2
Other educational setting	2

institution. We found no studies concerned solely with school-based initial teacher education.

In section 1.6, we considered four different ways in which quality might be conceptualised in a study which provides evidence about the impact on quality of structures in ITE. Table 3.8 shows that a minority of the studies used more than one interpretation of quality. The most common interpretation was a user-defined version of quality. Quality in this sense was usually examined by collecting feedback from students and other stakeholders (frequently employers) by questionnaires and the popularity of this approach may be connected to the relative ease of obtaining this data.

**Table 3.8:** Definition of quality (N = 53, not mutually exclusive)

Definition of quality	Number of studies
User defined	24
Internally defined	19
Externally defined	7
Conceptual coherence	14

### 3.3 Identifying and describing studies: quality-assurance results

#### Screening

##### 3.3.1 Screening of titles and abstracts

All abstracts were screened by two members of the Review Team. There was a ninety percent agreement on these initial decisions, and disagreements were resolved in discussion. A small sample was moderated by Carole Torgerson (CT) on behalf of the EPPI-Centre. The measure of agreement between the Review Team and the

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moderator for screening the sample was 18 out of 20. Where there was initially disagreement, the Review Team's justifications of judgements on the two titles and abstracts were judged to be sound. This was considered to be a very good level of agreement.

### 3.3.2 Screening of full papers first stage

All retrieved papers were screened by two members of the Review Team. There was a ninety five percent agreement on these initial decisions, and disagreements were resolved in discussion. A sample of five papers was moderated by CT. The agreement was perfect at the level of include/exclude, although there was some disagreement on the criteria for rejection. Discussion resolved these differences.

### 3.3.3 Keywording

All keywording decisions were moderated within the Review Team. Most keywording decisions were straightforward and there was very close agreement on most questions. A sample of keywording decisions on ten papers was moderated by CT. The agreement between the team and CT was very high. There was a little disagreement about study type, mainly on the boundaries between study types: that is, 'description' and 'exploration of relationships' and 'evaluation, naturally occurring'. These differences were resolved after discussion and it was therefore felt unnecessary to take forward any further quality-assurance checks.

## 3.4 Summary of the map

The overall research review question for this review is as follows:

*What evidence is there that the quality of ITE is influenced by its organisational structure, management processes and conceptual framework?*

Within this, the research review question identified for the in-depth review is as follows:

*What evidence is there from empirical research that the quality of ITE is influenced by its organisational structure, management processes and conceptual framework?*

### 3.4.1 Mapping of all included studies

Fifty-three studies met the inclusion criteria developed for the overall research review. These reviews and studies were keyworded and formed the basis of the systematic map. The map revealed a number of features of the research located in this area:

- Only five were evaluations, while 33 were descriptions and 13 were explorations of relationships.
- Forty of the studies were conducted in the USA.
- Forty-seven of the studies were conducted in a setting that included an HEI.
- In terms of our classification of the way in which studies conceived of quality, the most commonly used conception of quality was 'user-defined'.

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## CHAPTER FOUR

# In-depth review: results

This chapter presents the outcomes of the in-depth review of 18 studies. It describes the process of selecting the 18 studies (section 4.1) and gives details of the characteristics of these studies (section 4.2). Each study is described briefly and its contribution to answering the review question is considered (section 4.3).

### 4.1 Selecting studies for the in-depth review

Decisions to include or exclude studies from the in-depth review were based on the identification of 'type of study'. Studies classified as 'descriptions' or 'reviews' were excluded, while we included those classified as one of the following types:

- exploration of relationships
- evaluation: naturally occurring
- evaluation: researcher-manipulated

Eighteen studies were identified for the in-depth review. For the purposes of this review, we wanted to focus on those studies that used primary empirical evidence to make inferences relevant to our review question. The 33 studies we classified as 'descriptions', although relevant to our topic, did not set out to do this. Rather they argued the case for particular approaches to ITE, or described how principles for structuring ITE were put into practice. The remaining two studies were classified as reviews. In each case, they used policy and research literature to support recommendations for changes to (USA) national and state policies on organisation of ITE.

### 4.2 Further details of studies included in the in-depth review

The 18 studies included in the in-depth review were classified according to our judgement of the weight of evidence (WoE) that they contributed to answering the review question. In making this judgement, we took into account the quality of

execution (WoE A), the extent to which the research design and analysis were appropriate to the review question (WoE B), and the relevance of the focus of the study to the review question (WoE C). The 18 studies, with the classification of their weights of evidence are listed in Table 4.1.

In moving from the three individual WoE judgements to an overall judgement, in most cases the rating which was in the majority was chosen, but in two cases where the ratings were 'two low, one high', individual decisions were made. In both these cases, the soundness of the studies was rated as high, but appropriateness of research design and relevance of the focus were rated low. The first of these two studies (Ruhland and Bremer, 2002) was rated as medium overall, while the second (Scales and McEwin, 1994) was rated as low overall. Ruhland and Bremer was rated low for appropriateness of research design (B) and for relevance of focus (C), and high for quality of execution (A). The low rating for relevance of focus was determined in large measure by the broad nature of the study. Only a small element of the study was of interest to us in relation to our review question, but this small element was considered to be as relevant as other studies rated as medium on this question. We therefore agreed to give this study a medium rating overall. Scales and McEwin was also rated low for appropriateness of research design (B) and for relevance of focus (C), and high for quality of execution (A). However this study, in contrast to Ruhland and Bremer (2002), was generally poorly focused on the review question, rather than being a wide ranging study that was only relevant in part. For this reason, an overall rating of low was judged to be appropriate.

**Table 4.1:** Weight of evidence (WoE) for studies included in the in-depth review

Study	WoE A	WoE B	WoE C	Overall weight of evidence
Brisard (2003)	Low	Low	Low	Low
Brouwer (1987)	Low	Low	Medium	Low
Burbank (1986)	Low	Low	Medium	Low
Cooper et al. (2004)	Medium	Low	Low	Low
Draper et al. (1997)	Medium	Medium	High	Medium
Gormley et al. (1993)	Medium	Medium	Medium	Medium
Kelly and Dietrich (1995)	Low	Low	Medium	Low
Koch (1986)	Medium	Low	Low	Low
Ntoi and Lefoka (2002)	Low	Medium	Low	Low
O'Hara and Cameron-Jones (1997)	Medium	Medium	Medium	Medium
Paccione et al. (2000)	Low	Low	Medium	Low
Powney et al. (1993)	Medium	Medium	Medium	Medium
Ross (2001)	Low	Low	Medium	Low
Ruhland and Bremer (2002)	High	Low	Low	Medium
Scales and McEwin (1994)	High	Low	Low	Low
Soares and Soares (2002)	Low	Low	Medium	Low
Wait and Warren (2001)	Medium	Low	Low	Low
Whitty et al. (1997)	Low	Low	Medium	Low

The majority of the 18 studies included in the in-depth review were classified as 'exploration of relationships', rather than evaluations, including all five of those studies classed as 'medium' for weight of evidence.

**Table 4.2:** Type of study (N = 18, mutually exclusive)

Type of study	Number of studies
Exploration of relationships	13
Evaluation: naturally occurring	4
Evaluation: researcher-manipulated	1
Total	18

The proportion of published and unpublished studies for the group of 18 studies was similar to the overall proportion.

**Table 4.3:** Status of study (N = 18, mutually exclusive)

Status	Number of studies
Published	5
Unpublished	13

**Table 4.4:** Phase of ITE (N = 18, mutually exclusive)

Phase of ITE	Number of studies
Primary	7
Secondary	5
Cross-phase	3
Other	1
Not known	2

The USA was once again the dominant country of origin of the studies.

**Table 4.5:** Country in which the study was conducted (N = 18, not mutually exclusive)

Country	Number of studies
England and Wales	2
France	1
Lesotho	1
Netherlands	1
Scotland	4
USA	11

Studies identified for the in-depth review were slightly more likely than the remaining 35 studies to take a user-defined view of quality. Where studies took an evaluative rather than a descriptive or

exploratory approach, ascertaining the views of users was a common first resort.

**Table 4.6:** Definition of quality (N = 18, not mutually exclusive)

Definition of quality	Number of studies
User defined	12
Internally defined	8
Externally defined	2
Conceptual coherence	2

### 4.3 Synthesis of evidence

#### 4.3.1 Studies contributing a medium weight of evidence

Five studies were judged to contribute a medium weight of evidence to our review.

**Draper et al. (1997)** undertook a study of the preparation of primary school teachers in Scotland ‘designed to identify similarities and differences which exist between BEd and Postgraduate Certificate of Education (PGCE) trained teachers in relation to their background, deployment, quality (defined as strengths and weaknesses) as perceived by head teachers who employ them and their career development and to suggest implications of these similarities and differences for the appropriate balance of places between training routes’ (p 1). They also aimed to assess whether the training route was a significant variable in the minds of those who employ and deploy, and support and assess new teachers. To achieve these aims, four separate studies were undertaken which collected data on the following:

- teacher supply
- experience of the probationary year
- headteachers’ views of the two routes
- subsequent careers of teachers trained via the two routes

In particular, headteachers’ reports on probationary teachers were used as a means of measuring strengths and weaknesses of the teachers towards the end of their first year of teaching.

The key results of the study in relation to our review are as follows:

- The training route cannot be considered to be a distinct variable, but is rather part of a package of variables.
- The prevailing view of headteachers is that PGCE trained teachers are as good as, but no better

than, BEd trained teachers. There is a minority view that BEd trained teachers are better.

- No differences were evident in subsequent career development for the two routes at the nine-year stage.

The study addresses our concern with organisational structure through its comparison of two very different routes into teaching. Its main source of evidence about quality is through headteachers’ assessment of teaching strengths and weaknesses; that is, the study takes a user-defined view of quality. As is the case for other studies which compared ITE programmes, the design of the study does not allow the authors to attribute particular outcomes to the training route taken, nor does it allow them to identify characteristics of the training which are linked to particular outcomes.

**O’Hara and Cameron-Jones (1997)**, again working with primary school teachers in Scotland, compared newly qualified teachers who had completed a BEd or a PGCE teacher training course at a particular college in 1988 with those who completed such a course at the same college in 1996. They aimed to identify any differences in professional competences between newly qualified teachers qualifying in 1988 and 1996, and those newly qualified teachers emerging from BEd and PGCE routes. The college’s own grading profile, based on the Scottish Office guidelines, was used as a measure of teaching quality. The authors chose to analyse relative strengths of each cohort, rather than try to make a direct quality comparison since they could not rely on comparable application of the grading scales for the different cohorts. They report that, in both 1988 and 1996, PGCE students were stronger on the more cognitive aspects of pedagogy: that is, handling the subject, planning learning and assessing and evaluating. The strengths of BEd course students lay in their interaction with children: their management of children and their communication with them. The authors describe these as ‘suggestive results from one institution’.

This study addresses our concern with organisational structures in a similar way to Draper et al. (1997). It sets out to make a direct comparison between two different training routes. However, the means it uses to compare quality is internally defined, in that it relies on the judgements of course tutors rather than ‘users’. This is a smaller study and is confined to one institution. While it suggests that there are important differences between graduates of the two routes, it does not provide evidence that one route is ‘better’ than the other in terms of its graduates’ levels of competence. Nor does it provide any evidence that such differences are attributable to training routes rather than, for example, differences in characteristics of trainees on entry.

**Powney et al. (1993)** undertook a project to monitor a pilot course being offered by the Moray House Institute of Education in Scotland. The pilot

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course was a secondary PGCE. The innovative elements of the course were an increased time in school, accompanied by changes in the organisation of the placements and support for students. The main aim of the study was to identify views of participants in the pilot year and not to evaluate the PGCE course as a whole. This aim was pursued through five areas of enquiry:

- school experience
- balance and partnership
- mentoring
- supporting structures
- resources

The research design involved quantitative and qualitative methods to collect the perspectives of initial teacher education students in the pilot and non-pilot groups. This data was triangulated by additional information provided by sub-samples of pilot and non-pilot students, school staff, HEI staff, other contributors (LEA officers, GTC officers, other researchers and HMI) and documentation.

The study reported that ‘broad consensus emerged among all groups of informants about the benefits to students of the increased time in school and the arrangements for their mentoring’ (p 89). These benefits included confidence due to longer placements and continuity of experience, and more help from staff in schools. The pilot introduced the concept of ‘mentoring’ to describe a different kind of relationship between student teacher and school staff, and the study identified ‘the potential for mentoring to change the nature of school placement’ (p 90). In response to the longer school placements, ‘students mostly welcomed extra time in schools, but many also said that they were short of time for subject and professional studies’ (p 93). There was evidence that the mentors’ role in assessment of students produced variable results (too lenient or too harsh) and that quality-assurance procedures needed further enhancement. As a result of longer school placements and changed roles of mentors, increased demands on schools were acknowledged.

The evidence about the quality of the course was collected as the course progressed, and no evaluation was made of end-of-course performance or students’ subsequent teaching careers.

The study addresses organisational structures in its focus on time spent in school, and the balance between school and college components. It looks at management processes in its concern with partnership working, the role of mentors, reliability of assessment, quality assurance and finance for mentors.

The researchers stated clearly that they were

reporting perceptions of the pilot programme and not evaluating the course. In as far as the study was concerned with quality, it approached this concept through students’ views (in our terms, a user-defined conception of quality) and through the views of course tutors and others involved in offering the course (an internally defined conception of quality). These offered a broad consensus that increased time in school was of benefit to students.

**Gormley et al. (1993)** undertook a study with primary and intermediate school student teachers from one college in the USA. The study aimed to examine the thoughts about teaching of two groups of student teachers, one graduate and one undergraduate, on two different teacher education programmes. The main difference in terms of professional preparation between the two groups of students was the extent of their practical experiences in school. The research questions (pp 4-5) were as follows:

- Do student teachers who have participated in extensive practice think differently about student teaching than those who have not?
- Do student teachers’ thoughts about teaching change in predictable ways as suggested by developmental models of teacher thinking?
- What patterns emerged in the thinking of student teachers over the course of their student teaching experiences?

The two groups of initial teacher education students were compared with regard to their ability to think about teaching and learning, based on their responses to open-ended written questionnaire items administered before and after the period of student teaching. The authors report that undergraduate students (who had had longer previous periods of practical experience in school) were more concerned with children’s learning, while the graduate students were more concerned with lesson planning and classroom management. The undergraduate students’ thinking about teaching changed in ways that were consistent with developmental models of teacher thinking: that is, they moved from concern with their own actions and basic teaching competencies to more sophisticated concern with children’s learning. The graduate students, in contrast, did not show this kind of progression.

In their concern with the effect of longer school experiences, the authors are addressing the organisational structure of the programmes of ITE. The conception of quality that they use is based on their view (backed by the research literature) of the nature of teacher development. Since the researchers were members of the course team, we have identified this as an internally defined model of quality.

**Ruhland and Bremer (2002)** report on a study undertaken across 36 states of the USA with a



particular focus on the professional preparation of career and technical education (CTE) teachers. The purpose of the study was ‘to examine alternative teacher certification procedures and professional development opportunities available to secondary academic and CTE teachers, and to describe recently certified CTE teachers’ teaching experiences and how they vary based upon the type of teacher certification program’ (p 1). As this extract suggests, this was a broad ranging study. For the purposes of our review, we looked at the study’s attempts to answer one of its research questions: ‘Are there differences reported among CTE teachers grouped according to teacher certification program in their ratings of pre-service preparation?’ (p 1) Data was collected through a telephone survey of CTE teachers who had had their pre-service training through a variety of routes and institutions. The results are reported in terms of differences between groups who had taken different certification programmes: that is, baccalaureate degree in education, fifth-year or post-baccalaureate programme, and alternative certification programme. Baccalaureate degree programmes typically last four years and attract students straight from high school. Fifth-year programmes consist of a year’s professional preparation taken after a first degree. The term ‘alternative certification’ is used to describe any other kind of preparation programme, including accelerated and work-based routes. Students on alternative certification courses are typically older and have work experience. Significant differences were found between groups in the areas of pedagogy and knowledge of subject matter. ‘In pedagogy, teachers with a baccalaureate degree in education felt the most prepared, and alternatively certificated teachers felt the least prepared. Subsequently, in knowledge of subject matter, alternatively certificated teachers felt the most prepared’. (p 45)

The report highlights a number of differences between the organisational structures of these different programmes of teacher education, but there are also other differences between the programmes, including, importantly, differences between the student cohorts entering them.

The study presents evidence about the quality of the programmes drawn from interviews with students and takes, in our terms, a user-defined view of quality. The research design does not allow the authors to distinguish between the effects of the training programme and those of the cohort characteristics.

Each of these five studies presents comparative information about programmes of ITE. In each case, we have classified the study type as exploratory rather than evaluative, since each sets out to examine possible relationships between aspects of the ITE programmes and their outcomes, rather than seek to measure effects. Each falls short of offering firm evidence about the impact of structures on quality. In the case of the studies

by Draper et al. (1997), O’Hara and Cameron-Jones (1997) and Ruhland and Bremer (2002), the research design compared outcomes of programmes which differed in their organisational structures, but the evidence collected does not allow the researchers to attribute differences in outcome to specific aspects of the programmes (in particular, to differences in organisational structure). The study by Powney et al. (1993) takes a closer focus on process and can comment more authoritatively on the impact of elements of change, rather than consider the programme as an entity. However, it sets out to monitor, rather than to evaluate, the pilot programme and conclusions about quality are necessarily tentative. The study by Gormley et al. (1993) uses qualitative data which is closely related to the students’ learning processes, but the essential research design treats the nature of these learning processes as an outcome of the type of training programme. Although the authors are careful to point out that the difference between the professional preparation of the students on the two programmes is limited to the amount of school experience undertaken before student teaching, they do not establish that there are no significant differences between the cohorts at the beginning of their programmes.

Taken together, four of these five studies (those by Draper, Gormley, O’Hara and Ruhland) offer evidence of differences between cohorts of students who have followed different ITE programmes. More evidence of this kind might allow us to begin to make claims about the aspects of difference between programmes that are linked with differences between the cohorts of graduates. Both Powney et al. (1993) and Gormley et al. (1993) offer suggestive evidence of the benefit of an increase in the amount of time spent in school, with commentary on the conditions necessary for this additional time to provide effective learning experiences.

### ***4.3.2 Studies contributing a low weight of evidence***

The studies considered to contribute a low weight of evidence were in this category either because the research design was not robust enough to establish confidence in the results, or because the relevance of the results to the review question was marginal.

**Cooper et al. (2004)** conducted an online survey of 1,611 foreign language teachers in Georgia, USA, designed to how they evaluated their pre-service training. Satisfaction scores were collected for various aspects of the training programme, and for training in various teaching competencies. The item with the highest approval score was student teaching and free responses to the survey indicated that student teachers felt that school experiences should be longer. According to the author, the survey results strongly suggest that foreign language teacher development programmes should include more time spent in school settings during initial

training.

**Soares and Soares (2002)** compared two groups of students working at the same higher education institution in the USA. Group 1 were following a traditional programme, with limited instructional activities with school pupils before a final student teaching placement. Group 2 had a sequence of field experiences throughout their programme. Data was collected on student self-assessment and supervisors' assessments before, during and after teaching experience. Students in group 2 demonstrated greater confidence and competence. The authors concluded that immersion in joint education courses, consisting of simultaneous field experiences and academic study, led to students being more confident during training and more competent in the classroom as practising teachers than those not on the immersion course. However, we have attached a low weight of evidence to these conclusions because the reporting of the study was not in sufficient detail to command confidence in its methods of sampling, data collection and analysis.

**Wait and Warren (2001)** made a study of the different outcomes, in terms of students' abilities in classroom management, of traditional teacher preparation programmes and those based in professional development school (PDS) partnerships. Students trained on PDS programmes spent longer in school than those on traditional programmes and the co-operating teachers took more responsibility for their training. Two groups of novice teachers (79 in total), who had undertaken these different programmes of training were assessed on classroom management skills on three occasions (one, two and three years after their initial training). On each occasion, the teachers trained in the PDS scored higher. The study does not attempt to link these differences in outcome to differences in organisational structures and so makes a limited contribution to addressing the review question.

The study by **Ross (2001)** also involves a professional development school, but uses a very different research design. It aimed to document the relationship between the PDS experience and subsequent practice as a teacher through the eyes of five teachers. Data was collected through classroom observation, interviews and documentation. The quality of the provision was judged in relation to the programme aims. The researcher found evidence using criteria backed up by literature that the five graduate students who were sampled were reflective, collaborative, learner-centred and inclusive, but they did not indicate that they were refining their practice through enquiry. The PDS programme was a collaboration between a university in the Northeastern USA and partner school districts. However, few details were given about the organisation of the programme itself and so the contribution of the study to answering the review question is limited.

**Brouwer (1987)** undertook a broadly focused study

of ITE programmes at the College of Education, University of Utrecht. Questionnaire responses were collected from 357 student teachers at eight different times, as well as from 31 university supervisors and 128 co-operating teachers. The results of the quantitative analyses of these data were used to formulate hypotheses which were further investigated using the qualitative data collected from interviews, with sub-samples of each respondent type. Several of the specific research questions are relevant to our review question; however, most of the responses to these are tentative, since the paper cited is an interim report of the study. The final report was published internally to the university and not made publicly available. Relevant conclusions include the following:

- Research question 1: How to make entry into the teaching profession a more gradual experience. 'At this moment we hypothesize that the inductive approaches for sequencing pre-service programmes found in our study will appear to have led to different learning effects in beginning teachers, including higher levels of innovative teaching behaviours' (p 65).
- Research question 3: Which cooperating structures between the college and practice schools are desirable and realisable. 'We think it is a reasonable hypothesis to say that controlled feedback to student teachers from as many observants of their teaching as possible is the most influential single factor to which learning effects can be traced' (p 66).
- Research question 4: Cooperating teacher rewards. 'We conclude from the research .... about the consequences of withdrawal of cooperating teachers' fees that the continued implementation of this approach depends critically on the structural availability of financial rewards for cooperating teachers' (p 67).
- Research question 5: Recommendations about the organisation and content of college based and school practice periods in integrative teacher education curricula. It was thought too early to answer the question, but the researcher pointed out the main limitation of the research undertaken on this issue to date: no results were reported about the impact of school context variables on the socialization of prospective and beginning teachers. The researcher intended to focus on the ways in which student teachers could learn to anticipate the tensions and conflict with which their future work conditions are likely to confront them.

Each of these five studies (Cooper, Soares, Wait, Ross and Brouwer) is judged individually to offer a low weight of evidence. In general terms, however, they contribute to a broad consensus that the length and nature of school placement is crucial in determining the quality of ITE programmes.

While several of the remaining eight studies offer insights into our area of study, original methods of data collection or new theoretical frameworks, none of them addresses the review question directly, and they cannot be seen to be supporting each others' conclusions.

**Burbank (1986)** reports an evaluation of a pilot programme for elementary school teachers. Data was collected from interns, sponsor teachers, principals and university supervisors, and conclusions were drawn relating closely to the pilot programme. Those conclusions relevant to our review were as follows:

- University courses should not be scheduled during practicum.
- More methods courses should precede practicum.
- The amount and quality of interaction between interns and university supervisors should be improved.

The conclusions drawn are very much specific to the programme being evaluated and the authors claim no generalisability.

**Kelly and Dietrich (1995)** made a comparative study of two ITE programmes based at the same institution which differed both in their organisational structures and in their cohort characteristics. The undergraduate programme included two short school placements, whereas the graduate programme involved a 10-month internship. The study was designed to examine which factors, both in terms of the make up of the cohort of students and the programme design, were significant in affecting the outcomes of the two programmes. Three sources of data were used:

1. self rating questionnaires
2. coding of narrative journals
3. information about the age, gender and academic/employment details of the students

Differences in reported skills and the development of skills were noted, but the study concluded that the different entry level skills and maturity levels of students on the two programmes had a greater impact on the students' perceptions than the structure and organisation of the programmes. The role of co-operating teachers was seen to be important to both groups, but especially to those on the undergraduate programme.

**Koch (1986)** undertook a follow-up survey of graduates of an elementary school teacher preparation programme offered by Western Oregon State College. The findings of the study cannot be related to structural aspects of the programme.

**Paccione et al. (2000)** set out to compare the

'Project Promise' programme with those of more traditional teacher preparation programmes at Colorado State University. The Project Promise programme entrants were generally older than traditional entrants, having had a career outside teaching before entering the course. The programme involved students in higher contact hours and coursework demands than would normally be expected and there was more contact with university tutors when in school. The study suggests that Project Promise graduates were more satisfied with their training, and rated their own competence higher than teachers who trained via other routes. In addition, Programme Promise students were more likely to complete the course, get a teaching post and be employed in the school system two years later. Principals supervising Project Promise completers rated their performance higher than teachers with a similar experience but who trained via different routes. This study is unusual in that it also reports on the cost of training a student on the Project Promise programme compared with other programmes at the same institution, finding them to be many times higher.

**Scales and McEwin (1994)** conducted a large scale survey of teachers in middle grades in five states of the USA. They were concerned with comparing special middle school grades preparation programmes with elementary or secondary programmes through the perspectives of graduates. They concluded that teachers who had more than seven coursework and field experience components in their professional preparation rated the quality of their preparation programme on middle grade issues more favourably than teachers with fewer of these components, regardless of whether they were prepared in special middle grades programmes or in elementary or secondary programmes. Teachers who were prepared in special middle grade programmes were significantly more likely than other teachers to have had each of the identified preparation programme components covered. This study addresses organisational structures in that it is concerned with the degree of specialisation of training. The argument for specialisation is inconclusive, however, since the inclusion of particular components in the training programme cannot be taken as a proxy for quality.

**Brisard (2003)** made a comparison of postgraduate professional preparation of secondary teachers in England, Scotland and France. The study set out to compare the preparation of teachers in England, Scotland and France through case study investigations in three institutions. The researcher explored the various patterns of integration of theory and practice in the light of the following:

- overall course design
- partnership working between HEI and schools
- mentoring and tutoring schemes

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in place in the three selected programmes. Data was collected through interviews with student teachers. Loosely structured, the data focused on experiences of learning to teach and how the various aspects of the course and teacher educators contributed to their becoming a teacher. Interviews with school-based mentors and subject tutors were also conducted.

The results of the study suggested that the student teachers in England were more positive about their experiences on their ITE programme than those in Scotland and France. The former felt they benefited from university and school-based experiences, and valued the expertise of their university tutors.

In Scotland, student teachers found the school-based experience most beneficial. University based aspects of the course were felt to be important but they reported this idealised view of teaching clashed with the pragmatism of school experiences. School-based experience was not all positive and student teachers reported great discrepancies and a lack of coherence and consistency both in the support they received, and in the balance between teaching and school-based formative activities (such as observation and collaborative teaching).

In France, time spent in school was reported as most beneficial. Student teachers did not appear to benefit from as much learning support as those in England and Scotland. Student teachers were generally positive about their tutors (who were part-time practitioners), but said that there was little opportunity for individualised support. Another aspect of the course 'educational and professional studies' delivered by a variety of practitioners was perceived as 'a waste of time'.

The researchers use these results to draw conclusions about student teachers' perceptions of effective aspects of the programmes and sources of professional development.

This study makes a comparison of three programmes which have different organisational structures and collects data about the student teachers' experience of the quality of the programme. However, the design of the research is not such that organisational structure can be isolated as specifically linked to the differences in the student experience. Neither does the analysis of the data focus on the relationship between organisational structure and quality. It does not, in isolation, bring us closer to answering the review question.

**Ntoi and Lefoka (2002)** made a study of the Diploma in Primary Education programme at the National Teacher Training College, Lesotho. One purpose of the study was to assess the extent to which the programme was addressing the criticisms levelled at primary teacher education in Lesotho. Judgement of quality was based on how closely the operation of the course matched its espoused conceptual framework. The researchers identified

a number of important ways in which the course as experienced by students and staff was inconsistent with its aims. The conclusions of the study point to the way in which a shared vision on the part of the programme staff is essential to any contribution that a conceptual framework might make to supporting the quality of an ITE programme.

**Whitty et al. (1997)** report on the Modes of Teacher Education project, which used a series of large scale surveys to study the origins, nature, and effects of reforms of initial teacher education in England and Wales between 1991 and 1996. One of the main effects of these reforms was to increase sharply the proportion of the training course spent in schools. The project aimed to 'provide a sharper focus to the policy debate about the nature, costs and benefits of initial teacher education' (p 1). Specifically it focused on the modes of partnership that existed between HEIs and schools; the nature and extent of the involvement of teachers in ITE; user satisfaction with ITE programmes; and programme providers' models of teacher professionalism. Although each of these areas of inquiry is related to our review question, the methods of data collection and analysis used do not allow us to address the question directly. The project identifies three 'ideal typical' modes of partnership - collaborative, HEI-led and separatist - and examines the extent to which ITE tutors understand their programme to be based on a particular model of teacher development. In these ways, it offers a theoretical frameworks and methodological approaches through which it would be possible to address issues of quality. The researchers, however, do not put them to this use. They also report on the nature of teachers' involvement in ITE programmes but without making any direct link to quality. They report on a variety of measures of student and stakeholder satisfaction with courses, but without linking these judgements of quality to aspects of structure.

The study was designed to look at the effects on the ITE sector of a series of policy changes. These effects were considered in the light of frameworks for understanding teacher development and professionalism, but their impact on quality of teacher education was not explicitly addressed. Measures of student satisfaction and head-teacher opinion on new teachers' capabilities were employed, but these were not linked to any characteristics of the ITE programmes.

### **4.4 In-depth review: quality-assurance results**

All data extraction was moderated within the Review Team. The first paper dealt with by each pair was independently data extracted by each of the two team members and then a third version was agreed. Where the level of agreement between a pair of reviewers was very high, later work was done on a less stringent basis. After the data extraction by the first reviewer, a second team member suggested amendments which were discussed and agreed

**Table 4.7:** Weight of evidence (WoE) for studies included in the in-depth review

Study	Study type*	Overall weight of evidence
Brisard (2003)	Exploration	Low
Brouwer (1987)	Exploration	Low
Burbank (1986)	Exploration: NO	Low
Cooper et al. (2004)	Exploration	Low
Draper et al. (1997)	Exploration	Medium
Gormley et al. (1993)	Exploration	Medium
Kelly and Dietrich (1995)	Exploration	Low
Koch (1986)	Exploration: RM	Low
Ntoi and Lefoka (2002)	Exploration: NO	Low
O'Hara and Cameron-Jones (1997)	Exploration	Medium
Paccione et al. (2000)	Exploration: NO	Low
Powney et al. (1993)	Exploration	Medium
Ross (2001)	Exploration	Low
Ruhland and Bremer (2002)	Exploration	Medium
Scales and McEwin (1994)	Exploration	Low
Soares and Soares (2002)	Exploration	Low
Wait and Warren (2001)	Exploration: NO	Low
Whitty et al. (1997)	Exploration	Low

\* Note: NO = naturally occurring; RM = researcher-manipulated

by the pair. A sample of two papers (of the 18 taken through to this stage) was moderated using independent double data extraction by CT and a very high level of agreement was found.

#### 4.5 Summary of results of synthesis

For the purposes of this review, we wanted to focus on those studies that used primary empirical evidence to make inferences relevant to our review question. The 18 studies chosen to be taken forward for in-depth review were those classified as one of the following types:

- exploration of relationships
- evaluation: naturally occurring
- evaluation: researcher-manipulated

Table 4.7 summarises the study type and the overall weights of evidence (WoE) assigned to each of these

studies.

From the table, it can be seen that only five studies were rated as providing an overall medium weight of evidence.

##### 4.5.1 Synthesis of findings from studies in in-depth review

The quality of the evidence found in relation to our review question is such that it would be misleading to suggest that the studies taken together point to clear overall conclusions. Rather than attempt to identify such conclusions, we have examined the findings in relation to our review question and analysed them using our frameworks for understandings of quality and of ITE structures (as set out in section 1.6). We have also explored the possible reasons why rigorous research which addresses our review question is scarce, and suggest starting points for considering future research.

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## CHAPTER FIVE

# Implications

### 5.1 Strengths and limitations of this systematic review

#### 5.1.1 Discussion of the paucity of research in this area

In view of the wide range and scope of the policy and practice implications of the review question, we might expect there to be large numbers of robust studies attempting to answer some aspect of the question.

However, our review indicates that this is not the case, and a number of recent reviews of research on teacher preparation undertaken in the USA confirm this finding. The study by Wilson et al. (2001) was the first in a series of studies published by the Education Commission of the States (ECS). Allen (2003) and Lauer (2001) each undertook secondary reviews, using the studies located by Wilson et al. (2001), and Wilson and Floden (2003) to address questions of policy interest. Allen's review in relation to eight questions concluded that the research evidence offers limited support or is inconclusive on the majority of the questions addressed. Lauer also finds that the evidence is weak in a number of areas. These reviews were much broader than ours in that they looked at research relevant to all aspects of teacher preparation, and this is why they were not included in our review. They are also geographically restricted to the USA. Despite these differences, their conclusions on the paucity of research which gives clear evidence for policy formation seem relevant to our own review question.

Our experience of undertaking the review, along with some other recent publications, suggest a number of reasons why this might be so.

Firstly, the complexity of the process of teacher education makes it difficult to attribute differences in quality to specific aspects of the programmes. In a paper published after the search for our review was

completed, Smith and Gorard (2004) discuss findings from a statistical analysis of several large data sets concerning ITE in England and Wales. One of the aims of the study was to explore the extent to which it is possible to identify predictors of ITE success at an individual or an institutional level. A large number of data items was available at the level of the individual entrant to ITE, and also concerning the courses and institutions at which they studied. The measures of 'success' in ITE were restricted to achievement of qualified teacher status (QTS) and employment as a teacher within six months of completing training, and in the main statistical models applied achievement of QTS was used as the only measure.

One of the questions that the study asked was whether there was any evidence of differential effectiveness of institutions providing ITE. The data was found not to support any such conclusion. A number of different implications might be drawn from this analysis, and the inferences to which a reader is drawn will of course depend on their reason for being interested in the data. Smith and Gorard (2007) argue that we need to seek an explanation for the apparent contradiction presented by this data. Inspection reports by Ofsted point to sharp differences between institutions in their effectiveness, including their accuracy in assessing the competence of their trainees. Yet the data on award of QTS suggests very little variation in the proportion of students achieving the award. They offer three possible interpretations: the first is that the variables taken into account by the model are not the right ones; the second is that the providers are in fact similarly effective and that Ofsted inspection evidence on this is misleading; and the third interpretation, which they favour, is that 'ITT institutions are rewarding very high numbers of students with an unstandardised qualification that simply fails to differentiate between more and less competent professionals' (final page).

Our view is that further standardisation of the

qualification is an unnecessary and unattainable aim. We already have national standards for QTS which are extensively moderated through the external examiner system, for which one of the key questions is whether standards of student performance are comparable with similar courses. In addition, Ofsted inspections are concerned to check that ‘rigorous .. moderation procedures are employed’ (Ofsted, 2005, p 13) . We suggest, rather, that ability to teach is not a valid construct. The institutions which offer ITT courses are qualitatively different in their understandings of the contested concept of good teaching, and award of QTS is too crude a ‘measure’ of their effectiveness.

In terms of our review question, this analysis and conclusion illustrate very well the difficulties of undertaking quantitative studies in this area. Firstly, the measure of outcome used was chosen because it was the only one widely available, and not because it was a good measure of quality in ITE. Achievement of QTS depends on the standards applied by the provider in their assessment of the trainee, personal contingencies which may cause the trainee to leave the course, and characteristics of the trainee as well as the quality of the course itself. The models used took into account the effect of some trainee characteristics, but not in an entirely satisfactory way, as is described below. Secondly, the measure used was dichotomous rather than continuous or multi-valued. In other words, for each trainee, the only two possible outcomes were pass and fail. For each institution, the percentage pass rate was taken as the measure; but for institutions training small numbers of trainees, this makes the effect of individual success or failure inappropriately significant. Finally, the trainee characteristics used as factors were, again, those that were available rather than those that might have been chosen to account for success or failure to achieve QTS. The factors included sex, age, ethnic group and degree classification of first degree. Of the factors included, only degree classification might be taken as any measure of the trainee’s ‘ability’ for teaching and, as might be expected and as the analysis in Smith and Gorard’s paper confirms, the effect is not very strong. Hence the ability of the model to factor out characteristics of trainees that might impact on their ability to achieve QTS was weak.

For these reasons, it is not surprising that the authors fail to draw a conclusion about the quality of ITE provision in these terms. However, even if the data were to allow them to distinguish between institutions in this way, we would not be able to attribute the differences to any structural, organisational or managerial factors, since the data is not sensitive to these. The data used in these analyses was provided by the Training and Development Agency (TDA) and represented the best possible information available nationally. The extent to which it falls short of providing useful information for our review is a clear indication of the real difficulty of interpreting evidence from large scale

surveys for our purposes. These difficulties include lack of sensitivity in measures of success in ITE, the difficulty of linking individual success with quality of provision, and the lack of agreement on what constitute measures of trainees’ baseline competence or ability to benefit from undertaking ITE. Further, the poor level of information available about individual providers makes it difficult to link a provider’s success with characteristics of the provision.

A second set of reasons why research relevant to our question is scarce is that even more than school teaching and learning, teacher education was a highly politicised arena during the period of our study. Changes in practice were often dictated as much by policy shifts as by professional judgement. This meant that opportunity sample comparisons and post hoc analyses were the only feasible research design options. One of the recommendations of Wilson et al. (2001) is for comparative studies of programmes with ‘roughly comparable student bodies’ (p 33). However, the question as to what makes students comparable in terms of their ability to emerge from ITE as good teachers is not straightforward. Once this has been agreed, the production of a matched pair of samples is a matter of serendipity in an arena in which controlled experiments have usually been considered undesirable.

Thirdly, the field is under-conceptualised in terms of how quality is defined. There is not enough agreement amongst researchers and policy-makers about how ‘quality’ might be measured for studies to begin to be cumulative. The largest group of the studies we have identified opt for a user-defined measure of quality, but this is unsatisfactory in a number of ways.

Most of these operationalise this view by questionnaire survey of graduates of the course or of their employers. We suggest that, in many cases, this approach is taken because it is closest to the way in which courses are routinely evaluated for quality-assurance purposes and so both commands respect and trust from stakeholders, and demands less adaptation. However, there are many examples of studies which have taken different approaches, including those which have used an assessment of graduates’ teaching against criteria based on theoretical models or agreed by a professional community. Others have assessed students’ thinking and, in particular, changes in ways of thinking during the progress of the course. Still others have compared accounts of the provision in practice with the aspirations for it set out in the provider’s conceptual framework for teacher education.

These differences in approaches to interpreting quality reflect the practicalities of undertaking research in an arena of complex human interaction. They also reflect underlying differences in beliefs about appropriate aims for ITE and values which

guide its processes independently from its aims.

A recommendation of the Wilson review (Wilson et al., 2001) was that, in future research, there should be specific attention to impact on student outcomes. Our review did not make so strict a stipulation concerning evidence of quality in ITE. We chose to accept and note the understanding of quality that was explicit or (more usually) implicit in the study.

Finally, it may be that the best form of evidence available on these issues is not in the formally published research literature at all, but in some parts of the 'grey literature'. Much of the professional knowledge and the theoretical frameworks which inform the outworking in context of the overall structures, processes and frameworks for ITE programmes is communicated in unpublished reports, policy frameworks and quality assurance documentation. A planned second review on this subject will use these kinds of 'grey literature' in an attempt to map what kind of evidence they can offer.

### **5.1.2 The review question and the nature of systematic review**

The studies we have reported on present a very wide range of evidence, taking different methodological approaches and different views of appropriate ways of interpreting the success or quality of ITE provision. They also touch on a wide range of aspects of structures in ITE. There are few common themes.

The theme which is most commonly addressed is that of the influence of school experience on ITE. Two of the medium weight studies (Gormley et al., 1993; Powney et al., 1993) offer suggestive evidence of the benefit of an increase in the amount of time spent in school, and discuss the conditions necessary for this additional time to provide effective learning experiences. Others (Brouwer, 1987; Cooper et al., 2004; Ross, 2001; Soares and Soares, 2002; Wait and Warren, 2001) also address the length and nature of school placement as crucial factors in the quality of ITE. However, there is no firm evidence on common issues and little agreement on issues at the level at which conclusions would be useful to providers or policy-makers. Part of the reason for this paucity of strongly supported detailed conclusions is that we deliberately excluded studies which focused mainly on aspects other than structure. Studies which focused on curriculum or assessment in ITE, or on the way in which tutors or mentors carried out their role, or on the detailed workings of the partnership between schools and HEIs, were excluded. As a result, studies which began to answer the question 'What conditions are necessary for school placement to be effective?' might well have been excluded from this review. Moyles and Stuart (2003) found a similar need to exclude studies which focused on the role of the supervising teacher in their systematic literature review which addressed the question 'Which school-based elements of partnership in

initial teacher training in the UK support trainee teachers' professional development?'. These exclusions represent both a strength and a weakness of the systematic review system. The strength is in its transparency and focus. Once a review question and the related inclusion and exclusion criteria are determined, then the selection of evidence is a matter of procedure. However, if an area whose importance was not predicted emerges as of interest during the review (in our case, school placements), then the only response available to the Review Team is to initiate a further review to pursue that interest. One solution to this difficulty is to use even broader initial inclusion criteria than were used in this review, with the intention of using the systematic map as a means of identifying a suitable focus for the in-depth review.

### **5.1.3 The review and its users**

The Review Team was in an interesting relationship to this review in that they were at the same time the reviewers and also representatives of the users of this review, since each member of the team was also an ITE tutor and/or manager. This meant that we were interested both in the methods, approaches, rigour, concepts and definitions of the studies examined, and in their results and implications. This report is addressed to the community represented by the Review Team and it is concerned with all of these aspects. However, the method which was chosen for this review demands that standards of rigour take pre-eminence over relevance to practitioners. Other forms of review have more recently been developed which aim to identify conceptual or practice insight as well as to determine evidence about generalisable effects. In this review several articles which reviewers found thought provoking and relevant to their work do not contribute towards the synthesis because the standards of research design or reporting were not strong enough. In a synthesis, the overall conclusion must be well founded even in the absence of much contextual information. In other words, the results of the study must have a strong element of generalisability in order to contribute towards the synthesis. Very often, of course, the reason why a study is of interest to a practitioner is not because the results appear to be generalisable. Interest may lie in the details of the practice described, in the argument for change, in the voices of participants, or any of many other aspects of the research described. Clegg (2005) makes the point that, by demanding generalisability, syntheses may in fact leave out the very information in which the practitioners are most interested. The emphasis on whether there is robust evidence of an effect distracts attention from the process or context. Hence we do not argue that the synthesis is an adequate summary for practitioners of what is of interest in this set of studies in relation to our review question. The descriptive map together with the synthesis may serve the purpose of pointing practitioners to where they might find work of interest to them.



## 5.2 Future research

A review of USA studies to which we referred in Chapter One (Wilson et al., 2001) pointed to the 'relatively thin' research base for teacher preparation. Only part of this research base is relevant to our review question, but our results confirm that studies which satisfy the criteria set for rigour and empirical base, internationally as well as in the USA, are very few. Wilson et al. (2001) go on to say that 'the studies we found, however, suggest that good research can be done, but that it will take the development of more refined databases, measures, and methods, as well as complementary research designs that collect both qualitative and quantitative data' (p ii). We are less convinced that it is feasible to design rigorous empirical research which addresses the concerns of our review question directly. This difficulty is illustrated by the case of research on the role of school placement, as discussed earlier. General conclusions at the level of course structure - for example 'students benefit from longer school experiences' - must always be informed and tempered by concern for the nature of this school experience. Just which aspects of the nature of school experience are important is not sufficiently well-established for this to be the subject of large scale study. Student experience demands micro-study, while course structures must be looked at on the large scale. We suggest that questions about, for example, those arrangements for length and timing of school placement, are best addressed by starting with the detail of the school and student experience of placement and building up inferences for the best course structures in the given context.

The Wilson review also considered the body of research on alternative certification programmes in the USA since the early 1990s. This body is represented by a number of studies in our review. Our conclusions are very much in line with those of Wilson et al. who conclude that 'Future research will need to include more detailed descriptions of the various alternative route program structures and content before conclusions can be drawn about characteristics that make for high-quality programs' (p iii). We also suggest that these small scale studies will need to be synthesised to produce a cumulative weight of evidence about high-quality programmes of study. The nature of this synthesis, however, is up for debate. A synthesis which is additive requires some congruence of conceptual basis in the studies it synthesises. What Pawson et al. (2004) describe as a 'realist synthesis' may in fact be a more appropriate vehicle for this kind of synthesis. The first step in this process, that of

articulating the 'theories' behind the intervention programmes, enables the reviewer to test aspects of the intervention process and conceptual framework against the 'theories' as well as simply accept the view of quality adopted by the researchers. Such forms of synthesis have been actively pursued within 'theory testing' reviews on other topics.

Wilson et al. (2001) recommend that future research should pay careful attention to 'specific features of the content and quality' (p 32) of ITE programmes. While it is undoubtedly true that many of the studies we have examined are too vague about aspects of the programme structures to be useful in answering our review question, it is necessary to raise the question of which specific features should be reported. A judgement needs to be made about those aspects of the programme likely to impact on quality and this judgement will hopefully be based on detailed interpretive analysis of processes and mechanisms.

Hobson et al. (2005) started a large scale UK government sponsored project ('Becoming a Teacher'), tracking 5,000 beginning teachers over five years through a variety of initial teacher education programmes into their induction year and early professional development. The project is collecting evidence on how experiences of these three stages of entry into the profession vary according to the training route taken. It also seeks to answer the question 'Are there any important relationships between teachers' experiences of pre-service training and their subsequent development and early career paths?'. It can therefore be seen to be addressing the issue of quality in ITE in two ways: firstly, through teachers' experiences of ITE; and secondly, through its impact on their early career path. This is a large scale longitudinal study, involving a large team of researchers and funded by central government. Even so, the research design may not be adequate to the questions our review would ask of it. It may not be sufficiently large scale in its analysis and at the same time fine-grained in its data collection to answer questions about the impact of large scale structures on quality.

These arguments support a final recommendation from Wilson et al. (2001) which is for interplay between small scale and large scale research. A serious response to this recommendation would demand agreement on conceptual bases for research designs and long-term co-ordinated planning of research studies, which in turn demands long-term funding decisions.

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## CHAPTER SIX

# References

### 6.1 Studies included in map and synthesis

*Studies included in the in-depth review are indicated by an asterisk (\*).*

Alberta Education (1996) *An integrated framework to enhance the quality of teaching in Alberta: a policy position paper*. Edmonton, AB: Alberta Department of Education.

Arizona Governor's Office (1984) *Teacher education in Arizona: evolution or revolution: the report of the governor's task force on teacher education*. Phoenix, AR: Arizona Governor's Office.

Association of American Geographers (1990) *Improving pre-service training in geography for middle school teachers: a university school partnership. Executive summary and final report*. Washington: Association of American Geographers.

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\*Brouwer N (1987) Cooperation structures in preservice teacher education programmes and their effects on beginning teachers' classroom performance. Paper presented at: *Annual Meeting of the American Educational Research Association*, Washington, DC., April 20-24, 1987

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## Appendix 1.1: Authorship of this report

This work is a report of a systematic review conducted by the English Review Group.

The authors of this report are:

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## **Advisory group membership**

For this review:

Marilyn Leask (Training and Development Agency)

## **Conflict of interest**

There were no conflicts of interest for any members of the Review Group.

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# Appendix 2.1: Inclusion and exclusion criteria

## *Criteria for the systematic map*

### *1. Date*

- Included (1): Papers that were published (or unpublished but in the public domain) after 1984. Rationale: The establishment of the Council for the Accreditation of Teacher Education CATE in 1984 represented a very significant change in thinking about the management of ITE in England and Wales. Much of the policy background against which ITE providers operate is shaped by changes that began in this period. The twenty-year period of the review presents a manageable timeframe, which is nevertheless likely to include all studies that are set against a comparable policy background.
- Excluded (1) Not published (or unpublished but in the public domain) after 1984

### *2. Language*

- Included (2): Papers written in English. Rationale: The timescale was limited and the first (and main) language within the URT was English.
- Excluded (2) Not written in English

### *3. Focus on teacher education*

- Included (3): Papers that focused on the education of teachers
- Excluded (3) Papers that focused on education more generally

### *4. Focus on initial teacher education*

- Included (4) Papers that focused on initial / pre-service teacher education
- Excluded (4): Papers that focused on in-service rather than pre-service teacher education

### *5. Age range and institutional setting of pupils taught*

- Included (5) Papers that focused on education of teachers of school pupils in the 5-19 age range
- Excluded (5): Papers that focused on the education of teachers for other settings and age ranges

### *6. Focus on quality*

- Included (6) Papers that focused on the quality of initial teacher education
- Excluded (6): Papers that focused on aspects of initial teacher education without central concern for its quality

### *7. Focus on the role of tutors and mentors in ITE*

- Included (7) Papers that focused on the discharge of responsibilities by tutors and/or mentors at course or team level
- Excluded (7): Papers that focused on the roles adopted by individual tutors and mentors rather than on roles defined at course or team level

### *8. Focus on the conceptual framework for ITE*

- Included (8) Papers that focused on the conceptual framework for ITE, as expressed through the programme aims, definitions and design
- Excluded (8): Papers that focused mainly on the outworking of the conceptual framework through content, curriculum, teaching methods or assessment

### *9. Focus on structural aspects of ITE*

- Included (9) Papers that focused on the organisational structure or management processes



for ITE

- Excluded (9): Papers that focused on content, curriculum, teaching methods or assessment in ITE, rather than on the organisational structure or management processes

#### 10. Focused on partnership in ITE

- Included (10) Papers that focused mainly on the organisation and management of partnerships between schools and providers for initial teacher education
- Excluded (10): Papers that focused mainly on the effectiveness of partnership between schools and providers, rather than on the organisation and management of the partnership

#### 11. Focus on quality in ITE

- Included (11) Papers that focused mainly on the quality of initial teacher education provision.
- Excluded (11): Papers that focused mainly on methods of quality assurance, inspection or evaluation of ITE provision rather than on the provision itself

#### 12. Duplicates

- Excluded (12): Papers that were duplicates. Rationale: Allowance had to be made for human

error during the searching, screening and data-entry stages of the review process. Identifying duplicates early on was one way in which the budget could be more effectively utilised. These papers were excluded.

#### 13. Digests

- Excluded (13): Papers that were digests from the ERIC database. Rationale: These texts were reviews and were therefore secondary research. The work which they drew on was already included in the ERIC database and was therefore assumed to be included elsewhere in the review. These papers were excluded. Other reviews were not systematically excluded as they might lead to original research not included in any of the databases searched.

#### **Criteria for the in-depth review**

1. Studies categorised as descriptions
2. Studies categorised as methodology
3. Studies categorised as review: systematic reviews
4. Studies categorised as review: other review

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## Appendix 2.2: Search strategy for electronic databases

All searches were undertaken in May/June 2004.

*For Ask ERIC and ERIC*

((initial teacher education) OR (initial teacher training) OR (beginning teacher) OR

(student teacher) OR (preservice teacher) OR (pre-service teacher) OR (trainee) OR (intern) OR (practicum) OR (PGCE) OR (GTP) OR (QTS) OR (SCITT) OR (teacher preparation programmes) OR (teaching certificate) OR (bachelor of teacher) OR (bachelor of education) OR (diploma of education) OR (master of teaching) AND ((framework OR structure OR management OR organization OR organization OR MOTE)) AND ((effective OR inspection OR quality OR accreditation OR performance OR outcome OR satisfaction OR assessment) AND (year 1984 -) AND In = 'English'

*For BEI*

((initial teacher education) OR (initial teacher training) OR (beginning teacher) OR (student teacher) OR (preservice teacher) OR (pre-service teacher) OR (trainee) OR (intern) OR (practicum) OR (PGCE) OR (GTP) OR (QTS) OR (SCITT) OR (teacher preparation program?) OR (teacher certificate) OR (bachelor of teacher) OR (bachelor of education) OR (diploma of education) OR (master of teaching) AND (educat? OR learn?)) AND ((framework OR structure OR management OR organization OR organization OR MOTE) AND (educat? OR learn?)) AND ((effective OR inspection OR quality OR accreditation OR performance OR outcome OR satisfaction OR assessment) AND (educat? OR (learn?))

*For PsycINFO*

('initial teacher education ' OR 'initial teacher training' OR 'beginning teacher' OR 'student teacher' OR 'preservice teacher' OR 'pre-service teacher' OR 'trainee' OR 'intern' OR 'practicum' OR 'PGCE' OR 'GTP' OR 'QTS' OR 'SCITT' OR 'teacher

preparation program\*' OR 'teacher certificate' OR 'bachelor of teacher' OR 'bachelor of education' OR 'diploma of education' OR 'master of teaching') AND ('educat\*' OR learn\*')

*For Web of Knowledge - Social Sciences Citation Index*

TS = (initial teacher education or beginning teach\*) or ((initial teacher education or initial teacher training or beginning teach\* or student teach\* or preservice teach\* or pre-service teach\* or trainee or intern or practicum or PGCE or GTP or QTS or SCITT or teacher preparation program\* or teach\* certificate or bachelor of education or bachelor of teaching or diploma of education or master of teaching) and (educat\* or learn\*)) and ((framework or structure or management or organisation or organization or MOTE) and (educat\* or learning)) and ((effective or inspection or quality or accreditation or performance or outcome or satisfaction or assessment) and (educat\* or learn\*))

## APPENDIX 2.3 EPPI-Centre Keyword sheet, including review-specific keywords (version 0.97)

### A1. Identification of report

Citation .....  
 Contact .....  
 Handsearch .....  
 Unknown .....  
 Electronic database (please specify) .....

### A2. Status

Published .....  
 In press .....  
 Unpublished .....

### A3. Linked reports

*Is this report linked to one or more other reports in such a way that they also report the same study?*

Not linked .....  
 Linked (please provide bibliographical details and/or unique identifier) .....

### A4. Language (please specify)

.....

### A5. In which country/countries was the study carried out? (please specify)

.....

### A6. What is/are the topic focus/foci of the study?

Assessment .....  
 Classroom management .....  
 Curriculum\* .....  
 Equal opportunities .....  
 Methodology .....  
 Organisation and management .....  
 Policy .....  
 Teacher careers .....  
 Teaching and learning .....  
 Other (please specify) .....

### A7. Curriculum

Art .....  
 Business studies .....  
 Citizenship .....  
 Cross-curricular .....  
 Design and technology .....  
 Environment .....  
 General .....  
 Geography .....  
 Hidden .....  
 History .....  
 ICT .....  
 Literacy - first language .....  
 Literacy further languages .....  
 Literature .....  
 Maths .....  
 Music .....  
 PSE .....  
 Physical education .....  
 Religious education .....  
 Science .....  
 Vocational .....  
 Other (please specify) .....

### A8. Programme name (please specify)

.....

### A9. What is/are the population focus/foci of the study?

Learners .....  
 Senior management .....  
 Teaching staff .....  
 Non-teaching staff .....  
 Other education practitioners .....  
 Government .....  
 Local education authority officers .....  
 Parents .....  
 Governors .....  
 Other (please specify) .....

### A10. Age of learners (years)

0-4 .....  
 5-10 .....  
 11-16 .....  
 17-20 .....  
 21 and over .....

### A11. Sex of learners

Female only .....  
 Male only .....  
 Mixed sex .....

### A12. What is/are the educational setting(s) of the study?

Community centre .....  
 Correctional institution .....  
 Government department .....  
 Higher education institution .....  
 Home .....  
 Independent school .....  
 Local education authority .....  
 Nursery school .....  
 Post-compulsory education institution .....  
 Primary school .....  
 Pupil referral unit .....  
 Residential school .....  
 Secondary school .....  
 Special needs school .....  
 Workplace .....  
 Other educational setting (please specify) .....

### A13. Which type(s) of study does this report describe?

A. Description .....  
 B. Exploration of relationships .....  
 C. Evaluation .....  
   a. naturally-occurring .....  
   b. researcher-manipulated .....  
 D. Development of methodology .....  
 E. Review .....  
   a. Systematic review .....  
   b. Other review .....

## Appendix 2.4: Review-specific keywords

A.1 Phase of initial teacher education	A.1.1 Primary
	A.1.2 Secondary
	A.1.3 Cross-phase
	A.1.4 Other
	A.1.5 Not known
A.2 Curriculum covered in initial teacher training	A.2.1 Art
	A.2.2 Business studies
	A.2.3 Citizenship
	A.2.4 Cross-curricular
	A.2.5 Design and technology
	A.2.6 Environment
	A.2.7 General
	A.2.8 Geography
	A.2.9 Hidden
	A.2.10 History
	A.2.11 ICT
	A.2.12 Literacy: first language
	A.2.13 Literacy: further languages (EAL/ESOL)
	A.2.14 Modern foreign languages
	A.2.15 Literature
	A.2.16 Mathematics
	A.2.17 Music
	A.2.18 PSE
	A.2.19 Physical education
	A.2.20 Religious education
	A.2.21 Science
	A.2.22 Vocational
	A.2.23 Other curriculum (Please specify.)
	A.2.24 The material does not focus on curriculum issues.
A.3 Status of study	A.3.1 Empirical
	A.3.2 Non-empirical
A.4 Definition of quality	A.4.1 A. User defined
	A.4.2 B. Internally defined
	A.4.3 C. Externally defined
	A.4.4 D. Conceptual coherence

## APPENDIX 3.1: Details of studies included in the systematic map

Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
Alberta Department of Education (1996)	Canada	Teacher careers	Government department	Description	Cross-phase	The material does not focus on curriculum issues.
Arizona Governor's Office (1984)	USA	Teacher careers	Government department	Description	Cross-phase	General
Association of American Geographers (1990)	USA	Teacher careers	Local education authority Higher education institution Local education authority Post-compulsory education institution Primary school	Description	Other middle school	Geography
Berkheimer and Lappan (1996)	USA	Teacher careers	Higher education institution Secondary school	Description	Secondary	Mathematics Science
Brisard (2003)	Scotland, England, France	Teacher careers	Higher education institution Secondary school	Exploration of relationships	Secondary	The material does not focus on curriculum issues.
Brouwer (1987)	Netherlands	Teacher careers	Higher education institution	Exploration of relationships	Not known	The material does not focus on curriculum issues.
Burbank (1986)	Canada	Teacher careers	Higher education institution	Evaluation: naturally occurring	Primary Elementary school	The material does not focus on curriculum issues.
Cooper et al. (2004)	USA	Teacher careers Initial teacher education students	Higher education institution	Exploration of relationships	Cross-phase	Modern foreign languages
Dalton et al. (1987)	USA	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.

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Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
Diehl et al. (2000)	USA	Teacher careers Initial teacher education	Higher education institution Primary school Secondary school	Description	Cross-phase	Science
Draper et al. (1997)	Scotland	Teacher careers	Higher education institution Primary school	Exploration of relationships	Primary	The material does not focus on curriculum issues.
Foster (2000)	France	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.
Fouts (1984)	USA	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.
Gormley et al. (1993)	USA	Teacher careers	Higher education institution Primary school	Exploration of relationships	Primary	The material does not focus on curriculum issues.
Hall (1985)	USA	Teacher careers Initial teacher education	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.
Hallman (1998)	USA	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.
Impink-Hernandez (ed) (1989)	USA	Teacher careers	Government department Local education authority Federal programs	Description	Cross-phase	General
Jablonski (1992)	USA	Teacher careers	Higher education institution	Description	Primary	The material does not focus on curriculum issues.
Jensen et al. (2001)	USA	Teacher careers	Higher education institution Primary school Secondary school	Description	Other Special education	The material does not focus on curriculum issues.
Kelly and Dietrich (1995)	USA	Teacher careers	Higher education institution Secondary school Special needs school	Exploration of relationships	Secondary	The material does not focus on curriculum issues.

Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
King et al. (1992)	USA	Teacher careers	Higher education institution	Exploration of relationships	Not known	The material does not focus on curriculum issues.
Koch (1986)	USA	Teacher careers	Higher education institution	Evaluation: researcher-manipulated	Primary	ICT
Lamson et al. (1994)	USA	Teacher careers	Higher education institution	Exploration of relationships	Cross-phase	The material does not focus on curriculum issues.
Little and Robinson (1997)	USA	Teacher careers	Higher education institution Special needs school	Exploration of relationships	Not known	The material does not focus on curriculum issues.
McEneaney and Sheridan (1993)	USA	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.
Niess and Scholz (1999)	USA	Teacher careers	Higher education institution Secondary school	Description	Secondary	Mathematics Science
Ntoi and Lefoka (2002)	Lesotho	Teacher careers Initial teacher education students	Post-compulsory education institution National Teacher Training College	Evaluation: naturally occurring	Primary	The material does not focus on curriculum issues.
OHara and Cameron (1997)	Scotland	Teacher careers	Higher education institution	Exploration of relationships	Primary	The material does not focus on curriculum issues.
Paccione et al. (2000)	USA	Teacher careers Initial teacher education students	Higher education institution Secondary school	Evaluation: naturally occurring	Secondary	The material does not focus on curriculum issues.
Powney et al. (1993)	UK Scotland	Teacher careers	Higher education institution Secondary school Workplace	Exploration of relationships	Secondary	General

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Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
Ribich (1995)	USA	Teacher careers	Higher education institution Primary school Secondary school	Description	Not known	The material does not focus on curriculum issues.
Robbins and Skillings (1996)	USA	Teacher careers	Higher education institution	Description	Primary	The material does not focus on curriculum issues.
Ross (2001)	USA	Teacher careers	Higher education institution Primary school Secondary school	Exploration of relationships	Cross-phase	The material does not focus on curriculum issues.
Ruhland and Bremer (2002)	USA	Teacher careers	Higher education institution Local education authority State Departments of Education, USA Workplace - CPD, Workplace	Exploration of relationships	Cross-phase	Vocational
Scales and McEwin (1994)	USA	Teacher careers	Higher education institution Primary school Secondary school	Exploration of relationships	Other middle years	The material does not focus on curriculum issues.
Schlechty and Whitford (1986)	USA	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues.
Selke and Kueter (1995)	USA	Teacher careers	Higher education institution Secondary school	Description	Secondary	General
Shelley et al. (1991)	USA	Teacher careers	Nursery school Primary school	Description	Primary Early childhood	The material does not focus on curriculum issues.



Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
Shelton and Banks (1998)	UK	Teacher careers	Higher education institution	Description	Cross-phase	The material does not focus on curriculum issues. 21 and over Learners initial teacher education students
Soares and Soares (2002)	USA	Teacher careers	Higher education institution Other educational setting, Schools	Exploration of relationships	Not known	The material does not focus on curriculum issues.
Solorzano and Soloranzon (1999)	USA	Teacher careers	Higher education institution Primary school Secondary school	Description	Cross-phase	The material does not focus on curriculum issues.
Stoddart et al. (1984)	USA	Teacher careers	Higher education institution Local education authority	Review: Other review	Cross-phase	General
Stone and Mata (2000)	USA	Teacher careers Initial teacher education students	Higher education institution Primary school	Description	Primary	The material does not focus on curriculum issues.
Su (1986)	USA	Teacher careers	Higher education institution	Review: Other review	Cross-phase	The material does not focus on curriculum issues.

Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
Sullivan (1993)	USA	Teacher careers	Higher education institution Primary school Secondary school Special needs school	Description	Primary Secondary Other Special	The material does not focus on curriculum issues.
Trube and Madden (2001)	USA	Teacher careers	Higher education institution	Description	Not known	The material does not focus on curriculum issues.
Wait and Warren (2001)	USA	Teacher careers	Higher education institution Primary school	Evaluation: naturally occurring	Primary	The material does not focus on curriculum issues.
Waugh and McNamara (1996)	England and Wales	Teacher careers	Higher education institution Primary school Secondary school	Description	Cross-phase	The material does not focus on curriculum issues.
Wavering and McGee (2002)	USA	Teacher careers	Higher education institution Primary school Secondary school	Description	Cross-phase	The material does not focus on curriculum issues.
Whitty et al. (1997)	UK	Teacher careers	Primary school Secondary school Other educational setting SCITT	Exploration of relationships	Cross-phase	The material does not focus on curriculum issues.

Studies	Country/ Countries	Topic focus/foci	Educational setting(s)	Type(s) of study	Phase of ITE	Curriculum covered in ITE
Williams et al. (1995)	Australia	Teacher careers	Higher education institution Primary school Secondary school	Description	Cross-phase	The material does not focus on curriculum issues.
Wisconsin University, Milwaukee, School of Education (1988)	USA	Teacher careers	Higher education institution	Description	Secondary	The material does not focus on curriculum issues.
Zemal et al. (1999)	USA	Teacher careers	Higher education institution Primary school	Description	Primary	Science

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## Appendix 4.1: Details of studies included in the in-depth review

### **Brisard (2003)**

#### ***What are the broad aims of the study?***

Comparison of post-graduate professional preparation of secondary teachers in England, Scotland and France

#### ***What are the research questions and/or hypotheses?***

This study set out to compare the preparation of teachers in England, Scotland and France (abstract)

The researcher explored the various patterns of integration of theory and practice in the light of the overall course design; partnership working between HEI and schools; and mentoring and tutoring schemes in place in the three selected programmes.

#### ***What are the data collection methods?***

- *One-to-one interview (face to face or by phone)*
- *Documentation*
- *Coding is based on: Reviewers' interpretation*  
Researcher does not explicitly state that interviews were one-to-one or if they were face to face or by telephone.

#### ***What are the results of the study as reported by authors?***

England: Student-teachers were more positive than those from Scotland and France. They felt they benefited from university and school-based experiences. University tutors' expertise was valued.

Scotland: Student-teachers found the school-based experience most beneficial. University-based aspects of the course were felt to be important; input described as policy related; knowledge about the

Scottish system; and ideal teaching approaches and theories of teaching and learning. They reported this idealised view of teaching clashed with the pragmatism of school experiences. School-based experience was not all positive student teachers reported a great discrepancy and a lack of coherence and consistency in the support they got, and in the balance between teaching and school-based formative activities, such as observation and collaborative teaching.

France: Time spent in school was reported as being most beneficial. Student teachers did not appear to benefit from as much learning support as those in England and Scotland. Student teachers were generally positive about their tutors (who were part-time practitioners), but there was little opportunity for individualised support. Another aspect of the course 'educational and professional studies' delivered by a variety of practitioners was perceived as a waste of time. (pp 12-15)

#### ***What is the conclusion of the findings?***

The researcher concluded that, in England, France and Scotland, the student-teachers in the sample made positive comments about their course in relation to:

1. people - as sources of support and feedback
2. activities - as sources of improvement or professional development

Sources of professional development were:

1. opportunities to teach in schools
2. opportunities to observe other practitioners and be observed
3. opportunities to engage in professional dialogue with peers, tutors or teachers

4. opportunities to reflect on their practice
5. opportunities to discuss broader educational issues

Aspects of the course identified as unhelpful were:

1. decontextualised theoretical inputs from HEI tutors
2. limited or inadequate professional support and feedback the presentation of selected educational philosophy as an 'orthodoxy'
3. the existence of a strong discrepancy between schools and the HEI educational discourses and practice
4. a lack of consistent policy about student teachers' support in school

### **Overall weight of evidence**

Low

### **Brouwer (1987)**

#### ***What are the broad aims of the study?***

Present research should aim for a detailed description of the PDI-RUU's existing curricula and an exploration of their effects on students.

PDI-RUU = College of Education, University of Utrecht

#### ***What are the research questions and/or hypotheses?***

The research model addresses the following question: in what ways does the cooperation between student teachers, cooperating teachers and university supervisors combine with content characteristics of preservice programmes, as well as with factors in school environments, to eventually produce specific types of classroom performance in beginning teachers (p 9)?

#### ***What are the data collection methods?***

*Group interview*- Two groups of three students were interviewed.

*One-to-one interview (face to face or by phone)*- One-to-one interviews with university supervisors, cooperating teachers and beginning teachers

*Observation*- Beginning teachers observed in their classrooms

*Self-completion questionnaire*- All student teachers completed six questionnaires. All beginning teachers completed one questionnaire. All cooperating teachers completed one questionnaire. A sub-sample

of 17 cooperating teachers completed an additional questionnaire.

#### ***Self-completion report or diary***

The study said that a report would be written. No specific details given of the type or focus of this report.

#### ***Documentation***

Documentation about 24 preservice programmes. Further scrutiny of a sub-sample of 12 preservice programmes.

#### ***Coding is based on: Authors' description***

#### ***What are the results of the study as reported by authors?***

Since the withdrawal of cooperating teachers' fees in 1983, the organisational conditions for the university's preservice programmes have deteriorated. Fewer opportunities now exist for university supervisors and cooperating teachers to share and match their ideas about curriculum goals and principles. (Table 4.1.1, p 30)

university supervisors had differing views of short and long cycles. Three conceived short cycles during college-based periods as indispensable preparation for student teaching. The fourth favoured an alternation between school practice and college-based periods that enabled student teachers to use school experience for evaluation purposes. (p 35)

(Supervisors) could not attribute any superiority to either block programming (when students work exclusively in school or college) or parallel programming (when they work in both). An advantage of parallel programming was that it provided opportunities for students to try theoretical notions in the classroom. (p 36)

Researchers concluded that, in 1982-83, more often than not student teaching activities in preservice programmes increased in complexity (p 39).

Student teachers were given a reasonable amount of liberties in how to respond to pupils and how to try out teaching approaches (p 47).

The amount of influence exerted by preservice teaching activities on inservice teaching corresponded well to the amount of liberties beginning teachers experienced during student teaching (p 51). Two factors may inhibit the use of unconventional teaching approaches by beginning teachers: one a lack of opportunity during preservice school practice, and the other, a less than tolerant school climate during inservice teaching (p 50).

Researchers concluded that considerable social pressure must have been exerted on graduates to shape and control pupils in ways with which that

they disagreed (p 59).

A quarter of Utrecht graduates experienced a considerable negative impact on their personal lives due to stress at school. P.61

Behaviours mostly absent: ways of schooling that require existing barriers between classrooms and between schools and society to be broken down, assessment practices.

Behaviours mostly present: the ideal of reaching out to pupils by making learning materials, using cooperative small group work. p61-63

### ***What is the conclusion of the findings?***

*Research question 1:* How to make entry into the teaching profession a more gradual experience

We hypothesise that the inductive approaches for sequencing preservice programmes found in our study will appear to have led to different learning effects in beginning teachers, including higher levels of innovative teaching behaviours (p 65)

*Research question 2:* Focus - the goals of preservice education

'Growth competence' did not seem to manifest its self seriously until the second year of teaching (p 66). We hypothesised that 'transition shock', as determined by school environment had caused their growth competency to go through a latency period (p 66).

Researcher reports that he needs to analyse further 'starting competence.'

*Research question 3:* Focus on which cooperating structures between the college and practice schools are desirable and realisable.

We think it is a reasonable hypothesis to say that controlled feedback to student teachers from as many observant of their teaching as possible is the most influential single factor to which learning effects can be traced (p 66).

*Research question 4:* Cooperating teacher rewards

We conclude from the research... about the consequences of withdrawal of cooperating teachers' fees that the continued implementation of this approach depends critically on the structural availability of financial rewards for cooperating teachers (p 67).

*Research question 5:* Recommendations about the organisation and content of college-based and school practice periods in integrative teacher education curricula

It is too early to answer the question, but the researcher pointed out its main limitation: no results

were reported about the impact of school context variables on the socialisation of prospective and beginning teachers. The researcher intended to focus on the ways in which student teachers can learn to anticipate the tensions and conflict with which their future work conditions are likely to confront them. (p 68)

### ***Overall weight of evidence***

Low

### **Burbank (1986)**

#### ***What are the broad aims of the study?***

'...evaluation report on a pilot internship for prospective elementary school teachers'

#### ***What are the research questions and/or hypotheses?***

The pilot programme was evaluated through questionnaires, based on the Mitchell Internship Questionnaire Instrument (1980), using rating scales 1-5. These covered programme satisfaction, academic preparation, programme organisation / administration / communication, strengths and suggested modifications.

#### ***What are the data collection methods?***

*Self-completion questionnaire*

#### ***What are the results of the study as reported by authors?***

Recommendations:

Continue the SEIP with minor modifications.

University courses should not be scheduled during practicum.

More methods courses should precede practicum.

Improve amount, and quality, of interaction between interns and university supervisors.

Improve observation and conferencing skills of all participants.

Improve content and instruction of some of the university course.

Increase relevance of some university content to school experience.

#### ***What is the conclusion of the findings?***

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Improve observation and conferencing skills of all participants.

Improve content and instruction of some of the university course.

Increase relevance of some university content to school experience.

### **Overall weight of evidence**

Low

### **Cooper (2004)**

#### **What are the broad aims of the study?**

'The purpose of this article is to report on a project ... that conducted an online survey of current foreign language teachers in Georgia in order to determine how these K-12 teachers perceived and evaluated the effectiveness of their professional preparation' (p 38).

#### **What are the research questions and/or hypotheses?**

There are no specific research questions stated, but the survey asked teachers to evaluate their preparation.

#### **What are the data collection methods?**

*Self-completion questionnaire*

#### **What are the results of the study as reported by authors?**

For each question requesting evaluation of courses or of FL teaching competencies, average satisfaction scores are reported and compared.

Items with high scores (in order from the highest) are student teaching; foreign language composition and conversation; foreign language phonetics; pre-twentieth century literature; and foreign language cultural studies.

Items with low scores are classroom management techniques and using technology in foreign language teaching.

Global satisfaction scores (averages of the scores given on the evaluation questions) are compared by respondent characteristics (gender, years of teaching, language taught, native speaker status, type of school, highest degree). Only differences in type of school are significant, with public school teachers being more satisfied than private school teachers.

Open-ended responses are summarised (p 43).

### **What is the conclusion of the findings?**

According to the author, the survey results strongly suggest that foreign language teacher development programmes should include more time spent in school settings during initial training, more careful mentoring, more time spent in countries where the target language is spoken, more emphasis on developing language proficiency in university classes, and more time spent learning effective classroom management skills (p 44).

### **Overall weight of evidence**

Low

### **Draper (1997)**

#### **What are the broad aims of the study?**

The project was designed to identify similarities and differences which exist between BEd and PGCE trained teachers in relation to their background, deployment, quality (defined as strengths and weaknesses) as perceived by headteachers who employ them, and their career development, and to suggest implications of these similarities and differences for the appropriate balance of places between training routes.

#### **What are the research questions and/or hypotheses?**

1. What similarities and differences exist between BEd and PGCE trained teachers in relation to their background deployment quality (defined as strengths and weaknesses), as perceived by headteachers who employ them, and career development? (Is training route a significant variable in the minds of those who employ and deploy, and support and assess new teachers?)
2. What are the implications of these similarities and differences for the appropriate balance of places between training routes? (p 4)

#### **What are the data collection methods?**

*Self-completion questionnaire*

Data on headteachers' views of probationary teachers trained by the different routes was collected by questionnaire.

Data on teachers' early career development and views of training routes was collected by questionnaire.

#### *Other documentation*

Other background data (sex, age on completion of initial teacher education, type of programme followed, length of probationary period) was collected from records.

Data on quality of teaching was collected from existing reports written by headteachers on the performance of probationary teachers.

*Coding is based on: Authors' description*

### **What are the results of the study as reported by authors?**

Detailed results are presented in chapters 3 to 5.

The key findings are as follows:

The training route cannot be considered to be a distinct variable, but is rather part of a package of variables.

The prevailing view of headteachers is that PGCE-trained teachers are as good as but no better than Bed-trained teachers. There is a minority view that BEs are better.

No differences were evident in subsequent career development for the two routes at the nine-year stage.

### **What is the conclusion of the findings?**

'For the majority of head teachers training route does not seem to be a significant variable in relation to employment and deployment preferences. Route does not seem to be seen by them as a predictor of teaching strength or weakness.

For probationers however training route does seem to be a significant factor.' (p 38)

### **Overall weight of evidence**

Medium

## **Gormley (1993)**

### **What are the broad aims of the study?**

This study examined the thoughts about teaching of two groups of student teachers (one graduate and one undergraduate) on two different teacher education programmes to examine the relationship between the extent of practical experiences and students' thoughts about teaching.

### **What are the research questions and/or hypotheses?**

Do student teachers who have participated in extensive practical think differently about student teaching than those who have not?

Do student teachers' thoughts about teaching change in predictable ways as suggested by developmental models of teacher thinking?

What patterns emerged in the thinking of student teachers over the course of their student teaching experiences?

(pp 4-5)

### **What are the data collection methods?**

*Self-completion report or diary*

*Coding is based on: Authors' description*

### **What are the results of the study as reported by authors?**

After periods of practical teaching, undergraduate student teachers were more concerned with children's learning than graduate student teachers. Graduate student teachers were more concerned about lesson planning and classroom management. Undergraduate teachers' thoughts about teaching changed in predictable ways as suggested by developmental models of teacher thinking: that is, moving from initial concerns about self and basic teaching competencies, to more sophisticated concerns about children's learning. Graduate student teachers remained fixed on management and basic skill issues. Both groups of student teachers were highly impressionable about what others said about their teaching.

The researchers concluded that undergraduates are better prepared to teach than graduate students. They also suggested that classroom practical experiences accelerate novice teachers' growth towards expert pedagogy.

### **What is the conclusion of the findings?**

The researchers concluded that undergraduate students who had longer periods of student teaching experience in schools were better prepared to teach than graduate students who had limited student teaching experience in school. They also suggested that extensive and varied classroom practical experiences accelerate novice teachers' growth towards expert pedagogy.

### **Overall weight of evidence**

Medium



## **Kelly and Dietrich (1995)**

### ***What are the broad aims of the study?***

The purpose of the present study was to compare perceptions of students in two preparation programmes with similar configurations but differing learner characteristics to determine which factors had the greatest impact on teacher preparation outcomes (p 1).

### ***What are the research questions and/or hypotheses?***

'The purpose of the study...[is]...to determine which factors had the greatest impact on teacher preparation outcomes' (p 3).

### ***What are the data collection methods?***

*Self-completion questionnaire*

*Self-completion report or diary:* It is unclear whether this was coded by the researcher or participant.

*Coding is based on: Authors' description*

### ***What are the results of the study as reported by authors?***

Statement of results takes three pages of a seven-page paper.

Significant increases were noted in mean self ratings in most areas. Group 1, but not group 2 had significant increases in the area of classroom management, while group 2 but not group 1 had significant increases in the use of materials.

Similarities between the two groups:

Co-operating teachers were important to both groups, but especially group 2.

'Subjects in both programs demonstrated strengths in the areas of planning and instruction' (p 3).

Self-assurance developed for both groups.

Differences between groups:

Group 1 students were less tolerant of unmotivated pupils.

Relationships with university mentors were particularly important to group 1.

Group 1 students 'demonstrated significant improvement over time in the area of classroom management' (p 4).

Group 2 students 'demonstrated significant changes across time in the area of material usage' (p 5).

'While the student teachers (group 2) remained faithful to the instructions regarding journal entries, interns (group 1) tended to digress if an issue seemed important' (p 5).

### ***What is the conclusion of the findings?***

The authors conclude that cohort configuration is a powerful force and that both programmes provide academic and emotional support to students.

In addition to this general conclusion, the following conclusions were applicable to both programmes:

1. Students expressed confidence in their abilities, which the authors say may be a result of the sense of support and community provided by the students' peers and faculty staff.
2. The sequenced nature and content of the courses are crucial to successful teaching.
3. The specialised courses have a positive impact on planning and assessment.
4. Self-evaluation and reflection was a strength

There were some conclusions which highlighted differences between the programmes:

1. Age, gender, background and academic achievement differed.
2. MAT students were more positive towards faculty staff, possibly because of the way in which the support was organised.
3. MAT students were more confident, but this may have been due to age and experience.

### ***Overall weight of evidence***

Low

## **Koch, NE (1986)**

### ***What are the broad aims of the study?***

The aim was to evaluate the effectiveness of a programme for elementary school teaching.

### ***What are the research questions and/or hypotheses?***

'to evaluate the effectiveness' of the WOSC 'program for preparing elementary teachers':

1. How do first year teachers view the effectiveness of their general preparation?
2. How do first year teachers view their preparation in specific areas of elementary education?
3. How do first year teachers view their

competencies in the use of computers?

4. How do first year teachers perceive their general level of competence?
5. How do first year teachers view the extent to which WOSC contributed to that perceived level of competence?
6. How do principals view the effectiveness of the WOSC first year teacher?

### **What are the data collection methods?**

*Self-completion questionnaire*

### **What are the results of the study as reported by authors?**

Strengths of the WOSC program identified by participants are in line with earlier comparable evaluations.

In relation to the role the programme had in contributing to teaching competence, ratings vary. 'Planning and preparing, evaluation and dealing with the handicapped' score highly. Classroom management is less strong, but most teachers report that they are nevertheless 'competent in most areas' of this category. Lower rating scores apply to 'communication skills, interpersonal relations and computer skills'. Computer skills are 'the lowest reported'.

### **What is the conclusion of the findings?**

Generally, high levels of satisfaction with the WOSC programme are noted.

A further study is recommended.

### **Overall weight of evidence**

Low

### **Ntoi and Lefoka (2002)**

#### **What are the broad aims of the study?**

The study sets out to find how far the new Diploma in Education (Primary) (DEP) is addressing itself to the criticisms that have been levelled at primary teacher education in Lesotho, and to identify factors that impede the change process.

#### **What are the research questions and/or hypotheses?**

There are no details of research questions or hypotheses.

#### **What are the data collection methods?**

*One-to-one interview (face to face or by phone):*

Interviews with students and lecturers

*Observation:* Lesson observations of lecturers teaching in English, mathematics, science and education

*Self-completion questionnaire:* Surveys - staff and students. Questionnaires and exit questionnaires staff students and graduates.

*Self-completion report or diary.* DEP students: 27n wrote essays about their views of good and bad teachers; n8 kept a diary of classroom experiences

*Documentation:* Documentation about the DEP programme aims, objectives, content of four main courses.

*Coding is based on: Authors' description*

#### **What are the results of the study as reported by authors?**

Rationale and goals: DEP programme curriculum document set out rationale and goals (examples given) (p 277)

Aims and objectives: Researchers found that the DEP programme's rationale and goals did not translate into course aims and objectives (p 278).

Course content: The programme was found to be academic and content driven across English, mathematics, science and education courses and the ratio of 70-30 for content and teaching did not reflect that the intention to raise the entry requirement so that less time would be given to subject content (pp 278-279).

Teaching and learning methods - researchers found that the programme aims did not translate into teaching methods for example opportunities for personal study, reflection, dialogue and debate. They also found that students' prior attainment was not taken into account. (pp 279-281)

Assessment: Assessment by tests that required students to use their memories reflected the dominant transition method of college lecturers and was not consistent with course aims (pp 281-282).

Modelling good practice: College lecturers did not model good practice in their teaching of student teachers; they used transmission models, managed time badly and did not facilitate learning. The researchers found that this had a negative influence on student teachers approaches to teaching and learning in the classroom. (p 282)

Practical teaching: The results of analysis of PTC cohort experience of teaching practice showed that college lecturers' supervision was inadequate and that schools were not supportive of students. The researchers found little guidance for college lecturers about supervising students in teaching

practice. (p 283)

### **What is the conclusion of the findings?**

The authors (pp 283-285) concluded that there were contractions within the programme that needed to be resolved in relation to:

- curriculum and delivery of the DEP programme
- stakeholders - DEP students recruited did not have higher grades than PTC students; lecturers were poorly prepared to teach the new course and needed staff development
- college culture was not responsive to radical change

They proposed (p 285) that the college:

- adopt a change management strategy
- develop among staff a shared vision that they could own
- provide a staff development programme to enable staff to acquire new knowledge and skills
- disseminate the findings of the MUSTER study to all staff

They also highlighted the problems of recruiting good quality entrants to the DEP programme, due to a limited pool of suitably qualified candidates.

### **Overall weight of evidence**

Low

## **O'Hara and Cameron (1997)**

### **What are the broad aims of the study?**

This study compared two types of newly qualified teachers those who had completed a BEd or a PGCE teacher training courses in 1988, and those who completed in 1996.

### **What are the research questions and/or hypotheses?**

Are there differences in professional competences between newly qualified teachers qualifying in 1988 and 1996?

Are there differences in professional competences between newly qualified teachers emerging from BEd and PGCE routes?

### **What are the data collection methods?**

*School/college records (e.g. attendance records etc):* Grades held by the HEI

*Coding is based on: Authors' description*

### **What are the results of the study as reported by authors?**

In both 1988 and 1996, PGCE students were stronger on the more cognitive aspects of pedagogy (handling the subject, planning learning, and assessing and evaluating).

The strengths of the BEd course students lay in their interaction with children (their management of children and their communication with them).

### **What is the conclusion of the findings?**

The researchers concluded that the PGCE and BEd programmes for 1988 and 1996 cohorts of student teachers produced two different kinds of primary teacher: 'They are, typically, the PGCE-trained primary teacher who is relatively stronger on assessment and subject content and the BEd-trained primary teacher who is relatively stronger on classroom communication and classroom management.'

### **Overall weight of evidence**

Medium

## **Paccione et al. (2000)**

### **What are the broad aims of the study?**

The aim is to describe the 'Project Promise' programme for teacher preparation and to compare its costs and outcomes with those of other teacher preparation programmes.

The aim of the cost-benefit study was to 'determine how much more than a traditional program the Project Promise program costs and whether the expense leads to better outcomes' (p 225).

The aim of the Program Structure study was to 'determine whether program structure makes a difference in employment, retention and program satisfaction of those who complete teacher licensure' (p 229).

### **What are the research questions and/or hypotheses?**

Implicitly, the research question is about whether Project Promise is good value for money. The chapter seeks to justify the high cost of the programme on the grounds of its effectiveness.

### **What are the data collection methods?**

*Self-completion questionnaire*

This method was used for collection of the following:

data on general levels of satisfaction

data on satisfaction with preparedness in five areas of teaching skills

data collected from principals supervising new graduates from Project Promise

In each case, the questionnaire required responses on a five-point Likert scale.

Secondary data, such as publicly available statistics

Secondary sources, such as statistical data about the courses, was used extensively. Some of this came from previous named research and some was generated by the researchers, but the sources' other statistics are not identified.

This method was used in the follow cases:

data on age, grade point average and previous occupation of Project Promise participants (gathered by researchers)

data on contact hours on project promise compared with other academic staff (Richburg et al., 1996)

data on number of visits by university supervisors while on teaching placements on 'traditional' teacher preparation programmes (from Darling and Hammond, 1996) and on Project Promise (gathered by researchers)

data on costs of programmes (generated by researchers)

Not stated / unclear

It is not clear whether the data about recruitment and retention came from other sources or was generated by researchers.

### ***What are the results of the study as reported by authors?***

1. The total cost of Project Promise per student per academic year is \$6,689.87 compared with \$1,463.38 for a student on the 'general programme'.
2. Each of the Project Promise programme completers was very satisfied with the course. Post-baccalaureate completers of teacher preparation programmes rated their satisfaction slightly less than somewhat satisfied. For undergraduate completers of teacher preparation programmes, the average satisfaction score was halfway between very satisfied and somewhat satisfied.
3. A much higher proportion for Project Promise than for the other routes of those starting the course was still in teaching two years after completing it (pp 228-229).

4. In all knowledge areas rated by Project Promise completers, PDS route completers and traditional programme completers, Project promise completers expressed more confidence in their levels of preparedness (p 230).

5. Principals involved in supervising Project Promise completers rated these teachers as higher performing than an average teacher with a similar teaching experience.

### ***What is the conclusion of the findings?***

The general conclusion is that, although the Project Promise completers are more costly to train, they are more satisfied with their training, and rate their own competence higher than teachers who trained via other routes. In addition, Programme Promise students are more likely to complete the course, get a teaching post and be employed in the school system two years later. Principals who are supervising Project Promise completers rate their performance higher than teachers with a similar experience but who trained via different routes.

### ***Overall weight of evidence***

Low

### ***Powney et al. (1993)***

#### ***What are the broad aims of the study?***

The main aim was to identify views of participants in the pilot year and not to evaluate the PGCE course as a whole (Summary p 8, p 1)

In this pilot course, 40% of the students would spend an increasing amount of time in school (p 1).

#### ***What are the research questions and/or hypotheses?***

...bearing in mind that the main aim was to identify participants views in the pilot year and not to evaluate the course as a whole the research proposal identified five areas of enquiry:

- school experience
- balance and partnership
- mentoring
- supporting structures
- resources

(p 10)

#### ***What are the data collection methods?***

*Group interview:* Group discussions of student teachers took place in study schools. It is not clear

how many in total or how they divided between pilot and non-pilot samples. (p 122)

*One-to-one interview (face to face or by phone):* Interviews were conducted in pilot and non-pilot schools, with student teachers, supervising teachers, co-ordinating mentor, mentors, and headteachers (p 123).

In addition, interviews were held with

- Moray House Institute staff tutors, course core staff, development and research
- LEA staff
- other informants (pp 120-121)

*Observation:* Observation of mentors' meeting and seminar / workshops for students (p 123)

*Self-completion questionnaire*

Self-completed questionnaires:

Students pilot group

Students non-pilot group

Mentors

Supervising teachers

Headteachers pilot group

Headteachers non- pilot group

Moray House Institute staff

(further details, pp 20-21)

*Documentation (p 14)*

Moray House Institute:

- course materials,
- information sent to schools
- mentor training materials,
- minutes of meetings

*Coding is based on: Authors' description*

### ***What are the results of the study as reported by authors?***

*School experience:* Broad consensus emerged among all groups of informants about the benefits to students of the increased time in school and the arrangements for their mentoring (p 89).

*Mentoring:* The pilot demonstrated the potential for mentoring to change the nature of school placement

(p 90).

*Balance and partnership:* Students mostly welcomed extra time in schools, but many also said that they were short of time for subject and professional studies (p 94).

*Informants did not have a single view of partnership:* senior management schools, college, LEA worked to establish principles of cooperation; staff in school felt partnership was initially one way with college staff leading, and they wanted more input (p 95).

*Supporting structures:* Organisational structures: numbers of students was not perceived as a problem by schools; assessment of students was an issue as teachers were too lenient or harsh; timing of assessment that affected employment prospects was felt by college staff and students to be too soon; further refinement was needed to quality assurance procedures; and financial resources and time were needed by schools to fund the mentors' role.

Other comments (caviats, p 98)

Researchers acknowledged that there might have been a 'Hawthorne effect'.

The study did not evaluate the end of course performance of students in final grades or cover longer-term effects of the course on students' teaching careers.

### ***What is the conclusion of the findings?***

Chapter 9 presents Conclusions and implications for action

*School experience* students can benefit from increased amount of time spent in schools during their training, balanced by time in higher education to reflect on educational practices and their underlying assumptions (p 109).

*Mentoring:* A scheme which gives time and added recognition to the mentoring processes empowers mentors and students (p 109).

*Balance and partnership:* Changing the nature of partnerships in teacher education entails change for all members of the partnership (p 110).

*Resources:* Innovation raises everyone's expectations that teacher training will be enhanced, but this is dependent on resources being available for each party to fulfil its responsibilities (p 110).

*Supporting structures:* A network of people is involved in school-based training and the underlying structures should provide both support and quality assurance (p 111).

*Teachers' professional development:* Spending nearly two-thirds of initial teacher training in schools only makes sense within a coherent concept

of development for teachers from the beginning of training; attainment of competencies by the beginning of a career in teaching; and sustained professional development through and after probation (p 111).

Implications for future action: There should be radical, far reaching and continuing debate within Scotland on the future shape of teacher education, with early decisions as to the form of partnership which will best achieve its purposes (p 112).

### **Overall weight of evidence**

Medium

### **Ross F (2001)**

#### **What are the broad aims of the study?**

'...the purpose of this study was to document the relationship between participation in a professional development school (PDS) teacher preparation program and subsequent teaching practices as perceived by five student' (p 2).

#### **What are the research questions and/or hypotheses?**

What is the influence of PDS on subsequent practice?

What is the varying impact of PDS experiences on subsequent practice?

What are graduates' perceptions of the contextual factors that supported and hindered the aims of the PDS programme?

What are the similarities and differences between experiences in a PDS programme and the 'outcome goals' (p 7)? promoted in the 'advocacy literature' (p 7) and in their particular programme?

#### **What are the data collection methods?**

*One-to-one interview (face to face or by phone)*

*Observation*

*Coding is based on: Authors' description*

#### **What are the results of the study as reported by authors?**

'Graduates reported that their experiences in their teacher preparation program were strong and positive' (p 8).

They consistently reported on five elements of their PDS training: the quality of mentoring; the excellent models of teaching; the involvement of the entire school; connections between coursework and the classroom; and support of the cohort structure (pp 9-13).

The graduates all felt that they had extensive experience in the majority of goals of PDS preparation: reflectiveness; collaboration; learner-centred practice; and that the interviews also indicated that the graduates displayed leadership, building connections with parents, teachers as agents of change, and raising expectations (p 14).

The teaching of three of the five graduates strongly reflects 'what is regarded as best practice' (p 16).

### **What is the conclusion of the findings?**

'The portraits of the classroom practices exhibited by these five graduates of a PDS teacher preparation program offer a lot of hope about the potential of the PDS model and quality teacher preparation' (p 20).

'The PDS model as presented by the Holmes Group (1990) has many potential implications for educational practice' (p 20).

Further conclusions about benefits of the PDS model throughout the section headed 'Educational Implications' (pp 20ff).

### **Overall weight of evidence**

Low

### **Ruhland and Bremer (2002)**

#### **What are the broad aims of the study?**

'The purpose of this study was to examine alternative teacher certification procedures and professional development opportunities available to secondary academic and CTE teachers, and to describe recently certified CTE teachers' teaching experiences and how they vary based upon the type of teacher certification program' (p 1).

#### **What are the research questions and/or hypotheses?**

The research question which is considered in this data extraction is

'Are there differences reported among CTE teachers grouped according to teacher certification programme in their ratings of pre-service preparation?' (p 1)

#### **What are the data collection methods?**

*One-to-one interview (face to face or by phone):* Interview questions covered the same information as those used in the questionnaire.

*Self-completion questionnaire*

*Coding is based on: Authors' description*

### ***What are the results of the study as reported by authors?***

The results of the questionnaire survey as relevant to this data extraction are given in tables 11 to 14 (pp 32-33). Significant differences were found between groups in the areas of pedagogy and knowledge of subject matter.

Results of the telephone interview survey are presented (pp 39-43). These results are not presented in terms of differences between forms of teacher preparation, and so are not considered relevant to this data extraction.

### ***What is the conclusion of the findings?***

'CTE teachers with different types of certification programs completed (baccalaureate degree in education, fifth-year or post-baccalaureate program, and alternative certification program) reported differences in the pre-service preparation areas of pedagogy and knowledge of subject matter. In pedagogy, teachers with a baccalaureate degree in education felt the most prepared, and alternatively certificated teachers felt the least prepared. Subsequently, in knowledge of subject matter, alternatively certificated teachers felt the most prepared.' (p 45)

### ***Overall weight of evidence***

Medium

### **Soares and McEwin (1994)**

#### ***What are the broad aims of the study?***

Report on a survey of middle level teacher preparation based on the 1992 'Windows of Opportunity' study and on a modified Delphi process

#### ***What are the research questions and/or hypotheses?***

Is preparation for those with special middle school grades preparation programmes, any more comprehensive than those who did have this special preparation?

Based on authors' description

#### ***What are the data collection methods?***

*Self-completion questionnaire*

*Coding is based on: Authors' description*

#### ***What are the results of the study as reported by authors?***

Teachers who had more than seven coursework and field experience components in their professional preparation rated the quality of their preparation

programme on middle grade issues more favourably than teachers with fewer of these components, regardless of whether they were prepared in special middle grades programmes or in elementary or secondary programmes.

### ***What is the conclusion of the findings?***

Teachers who were prepared in special middle grade programmes were significantly more likely than other teachers to have had each of the identified preparation programme components covered.

### ***Overall weight of evidence***

Low

### **Soares and Soares (2002)**

#### ***What are the broad aims of the study?***

The major purpose of this study was to determine whether a sequence of graduated field experiences that immersed the students throughout their accelerated teacher preparation programme would result in differentiated responses of competence and self-confidence (p 3).

#### ***What are the research questions and/or hypotheses?***

The study examined whether a sequence of graduated field experiences that immersed students throughout their accelerated teacher preparation programme would result in differentiated responses of competence and self confidence.

#### ***What are the data collection methods?***

*Observation:* Performance assessments on units of course (p 4)

*Self-completion questionnaire:* teacher performance assessment (p 3)

*Documentation:* Portfolios: developmental, self-assessment, showcase

#### ***What are the results of the study as reported by authors?***

Pre-student teaching: Pre-test essentially the same for groups 1 and 2; post-test group 2 higher self-assessments. Supervisors ratings same for both groups.

Pre-student teaching in final term: Group 2 showed higher self-assessments at pre- and post-test levels. Supervisors ratings followed same pattern.

Sample in two-year follow-up: Group 2 showed higher self-assessments at pre- and post-test levels. Supervisors ratings followed same pattern. Supervisors ratings for group 1 were significantly

lower. (p 4)

### ***What is the conclusion of the findings?***

The authors concluded (p 5) as follows:

1. Immersion in field experiences and academic study during pre-service programmes leads to more confidence and competence as teachers.
2. Mastery of teaching-learning process results from varied opportunities for rehearsal and constructivist approaches to building understanding of that process.
3. The preparation of teachers is best designed as an ecological system of teacher preparation.

### ***Overall weight of evidence***

Low

### ***Wait and Warren (2001)***

#### ***What are the broad aims of the study?***

'This article will look at the impact of the value of a Professional Development School, as it relates to classroom management skills' (p 2).

#### ***What are the research questions and/or hypotheses?***

The study is concerned with the different outcomes, in terms of students' abilities in classroom management, of traditional teacher preparation programmes and those based in Professional Development School partnerships.

#### ***What are the data collection methods?***

*Observation:* Using the North Carolina Teacher Performance Appraisal Instrument

*Coding is based on:* Reviewers' interpretation

#### ***What are the results of the study as reported by authors?***

Teachers trained in the Professional Development School programme scored higher on Management of Student Behaviour than the teachers trained in a traditional programme.

### ***What is the conclusion of the findings?***

'The data quite convincingly show teachers trained in the Duplin County /UNC-W Professional Development School Student Teaching Project had higher overall classroom management performance, as measured by the NCTPAI, than those teachers involved in a traditional student teaching program at the same university' (p 9).

'As a result of these findings we may expect a positive long range impact on teacher retention ... If these teachers have enhanced skills and adaptability as a result of their PDS experience, they may well be able to weather the storm of their novice years and help give strength to other new teachers who are struggling.' (p 10)

### ***Overall weight of evidence***

Low

### ***Whitty et al. (1997)***

#### ***What are the broad aims of the study?***

'...to provide a sharper focus to the policy debate about the nature, costs and benefits of initial teacher education' (p 1)

'The MOTE project studied the origins, nature, and effects of reforms of initial teacher education in England and Wales between 1991 and 1996' (abstract).

#### ***What are the research questions and/or hypotheses?***

The main paper does not report fully on the project. What can be gleaned from it is that the researchers were interested in the modes of partnership that existed between HEIs and schools; the nature and extent of the involvement of teachers in ITE; user satisfaction with ITE programmes; and programme providers' models of teacher professionalism.

The MOTE project report is not explicit about research questions.

#### ***What are the data collection methods?***

*One-to-one interview (face to face or by phone):* Semi-structured interviews were conducted with course leaders, other lecturers, teacher 'mentors' and a group of students.

*Observation:* Observations were made of at least one taught session at the HEI and at least one in a partner school.

#### ***Self-completed questionnaire***

Most of the data was collected by this method.

#### ***What are the results of the study as reported by authors?***

The main results as presented in the main paper are as follows:

The existence of three 'ideal typical' modes of partnership: collaborative, HEI-led and separatist

The majority of courses were operating largely on



the HEI-led model of partnership.

'Over a third (37.5%) of the respondent courses reported difficulties in recruiting schools. This difficulty was particularly evident in secondary courses and most pronounced in shortened, part-time or conversion courses. This is probably because these courses had a particular subject bias: 44% of them offered maths compared to 16% of conventional postgraduate courses and 39,1% of undergraduate courses. In fact, 20 out of 29 maths courses (69%) reported difficulties in recruiting suitable schools. In addition to problems in maths, difficulties were frequently mentioned in respect of science, technology and modern languages. Art, geography and religious education (RE) were also seen as problematic by some respondents. The point was made, in particular reference to RE, that departments were often small, with no Head of Department.' (p 5)

Teachers were becoming more involved in course design and admissions, but leadership remained largely the responsibility of the HEI. The overall pattern was one of teacher involvement, rather than responsibility.

In the exit questionnaire for new graduates for primary teaching, the following proportions judged themselves to be well or adequately prepared to teach: reading 82.5%, mathematics 79.5%, and science 89%.

In the questionnaire for NQTs for primary teaching, the following proportions judged themselves to be well or adequately prepared to teach: reading 88%, mathematics 93.5%, and science 88%.

In the questionnaire for headteachers for primary teaching, the following proportions judged the new teachers to be well or adequately prepared to teach:

reading 81.5%, mathematics 93%, and science 98%.

Other problems with placements:

'Competition from other HEIs had exacerbated problems with placements' (p 5).

'Where there were schools taking students from more than one HEI, it had sometimes caused complications or withdrawal of partnership' (p 5).

'Funding did not reflect the time and effort required' (p 5).

Finishing students felt themselves well prepared in using a range of strategies and resources, ensuring continuity and progression, maintaining motivation and interest, appraising the effectiveness of their teaching.

Finishing students and NQTs felt less well prepared in teaching children for whom English was an

additional language, special educational needs, personal and social education, information technology, and teaching non-core curriculum subjects.

Finishing students felt that HEIs contributed more than schools to professional understandings, but that the contributions were more even in practical competences.

'The data also indicated some significant differences between modes of training. For example, students on school-based Articled Teacher courses felt they had less understanding of child development than those on conventional courses, but felt better prepared for talking with parents.' (p 8)

'When asked whether their course was based on any particular model of the teacher, 137 out of 211 course leaders in the 1995/6 survey said 'Yes'. This percentage was identical to that of the 'old' universities at the time of the previous survey, but significantly lower than that obtained from the (then) polytechnics, where the Council for National Academic Awards (CNAA) had a strong influence on such matters.' (p 11)

'We found that 46% (of teacher educators) adhered to the notion of the reflective practitioner compared with 57% at the time of the previous survey. Meanwhile those specifically espousing the 'competency' model had doubled but only to 11%.' (p 11)

'Our survey shows that only about 8% of courses restricted themselves to using the competences specified in the government circulars, while over 75% had chosen to supplement the official lists with additional competences of their own. This was consistent with our fieldwork which indicated that there was little continuing objection to the idea of competences among course leaders, but only because they felt that reflective competences could be added to the official list in order to sustain a broader definition of professionalism.' (pp 11-12)

'Another question in our recent survey asked respondents to choose three words from a list which would best characterise the sort of teacher their course aimed to produce. Despite some resistance to this question, the responses beyond reflective, professional and competent were quite varied. However it is noteworthy that some of the terms that New Right critics often associate with HEI-based teacher education - such as childcentredness and critical - were amongst the least popular choices.' (p 12)

More detailed results of the ITE course survey are presented in the MOTE report.

### ***What is the conclusion of the findings?***

The main conclusions and implications suggested are as follows:

'It has been claimed by the government that half of students leaving teacher education courses and a similar proportion of head teachers are dissatisfied with their training... Yet even before the 92/93 reforms had been fully implemented, we found levels of satisfaction considerably higher than claimed by the government.' (p 6)

'Headteachers shared this positive evaluation' (p 7).

Undue emphasis on English, mathematics and science may put a squeeze on areas in which students already feel unprepared.

'...we were interested as researchers .. in the extent to which the reforms in initial teacher education were actually bringing about changes in the prevailing view of what it means to be a professional teacher' (p 10).

'In the medium term, there is likely to be increased variation and fragmentation in student experience beyond the rather narrow set of mandated competences. School-based training could mean that we move towards a variety of 'local professionalisms' (plural) at the margins, with the common elements of teacher professionalism increasingly confined to the officially prescribed competences and the new national curriculum for teacher education.' (pp 12-13)

'While our Topography shows that most course leaders still aspire to deliver extended notions of professionalism, as reflected in their extended list of competences, the changing structural arrangements and new funding regime are making it ever more difficult to do so' (p 14).

In addition, the following conclusions may be drawn from the MOTE report:

Aspirations of teacher educators to develop students

as 'reflective practitioners' remained stable.

Many teacher educators saw significant benefits in school-based programmes: increased professionalism in training; closer working relationships with schools; and benefits for teachers in terms of professional development.

They also recorded many difficulties:

the involvement of teachers in the training of students was usually limited to supporting and assessing students in the practice of teaching; and school-based programmes were more costly to run.

'Despite the many achievements of the current partnership models of teacher education noted by Ofsted and others, there are currently significant weaknesses. At the level of principle it is important to recognise that the HEI-led model of partnership that our research has shown to dominate practice is not always based on any clear rationale about how students learn to teach in the way the collaborative model is. Rather, as our evidence has shown, the dominant model is the product of constraints and pragmatics. There are constraints in terms of finance (paying for fuller forms of collaboration is expensive) and in relation to markets (finding sufficient schools able and willing to undertake the demands of full collaboration is extremely challenging). In addition, there are important constraints within higher education itself brought about by, for example, modularisation and semesterisation.' (p 77)

However, a possible limitation of the study is that it gives the perspective of students, NQTs and headteacher but no consideration is given to the effect of training upon pupil outcomes.

### ***Overall weight of evidence***

Low



The results of this systematic review are available in four formats:

**SUMMARY**

Explains the purpose of the review and the main messages from the research evidence

**REPORT**

Describes the background and the findings of the review(s) but without full technical details of the methods used

**TECHNICAL REPORT**

Includes the background, main findings, and full technical details of the review

**DATABASES**

Access to codings describing each research study included in the review

These can be downloaded or accessed at <http://eppi.ioe.ac.uk/reel/>

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