EPPI CENTRE

Leading education and social research
Institute of Education
University of London

Engagement in course development by employers not traditionally involved in higher education: student and employer perceptions of its impact

Centre for Higher Education Research and Information (CHERI) of the Open University

Report written by Anna Scesa and Ruth Williams with support from Brenda Little, William Locke and Winnie Tang

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

EPPI-Centre report no. 1601T 2008

SSRU Social Science Research Unit

TECHNICAL REPORT

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/**

The EPPI-Centre reference number for this report is 1601T.

This report should be cited as:Scesa A, Williams R (2007) Engagement in course development by employers not traditionally involved in higher education: student and employer perceptions of its impact. Technical report. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

CONTENTS

List of abbreviations

BEI	British Education Index
CHERI	Centre for Higher Education Research and Information
DfES	Department for Education and Skills
DIUS	Department for Innovation, Universities and Skills
EPPI-Centre	Evidence for Policy and Practice Information and Co-ordinating centre
ERIC	Education Resources Information Center
FD	Foundation degree
FE	Further Education
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HNC	Higher National Certificate
HND	Higher National Diploma
NVQ	National Vocational Qualification
PSRB	Professional, statutory and regulatory body
QAA	Quality Assurance Agency
SME	Small and medium enterprise
SWE	Supervised work experience
WBL	Work based learning
WoE	Weight of evidence

Preface

Scope of this report

This report describes the findings and methods of a systematic review of research about employer engagement in course development and its impact on employers and students. This review was commissioned by the Department for Children, Schools and Families and supported by staff of the EPPI-Centre at the Social Science Research Unit of the Institute of Education, University of London.

The review examines engagement in course development by employers that have not traditionally been involved in higher education; thus, it excludes studies that are concerned with the main professional occupations. It synthesises the findings of a small subset of the studies that were found in order to assess the impact of employer engagement in course development from the perspectives of employers and students.

The policy and practice implications of the findings of the review are discussed and recommendations for future research are made. One of the main conclusions is that there is need for more evaluative and analytical research to shed further light on this topic. The key messages of this review may be of particular interest to:

- policy-makers, by highlighting where current policy relevant to employer engagement in course development is supported by research evidence and where there are gaps;
- researchers (and commissioners of research), by highlighting areas where the evidence base is thin;
- practitioners, employers and students interested in the engagement of employers in non-traditional industries/sectors.

How to read this report

This is a systematic review, which has used rigorous and explicit methods to synthesise the evidence; as such this document is necessarily detailed. Some readers will be interested in the entirety of the report in order to get an overall picture of not only the findings of the review but also the process involved in undertaking a systematic review and how we came to these findings. Others will want to be directed to the parts most relevant to their needs.

The report is divided into five chapters:

- Chapter 1 presents the background to the review – the policy and research background, and the purpose and rationale for the review;
- Chapter 2 describes how the review group worked and the methods used;
- Chapter 3 describes the systematic map – the scope and coverage of the research literature that was found;
- Chapter 4 presents the results of the in-depth review of the findings of a subset of the literature that was identified;
- Chapter 5 discusses the strengths and limitations of the review and the policy, practice and research implications of the findings.

Where to find further information

http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2316

CHAPTER ONE

Background

The Centre for Higher Education Research and Information (CHERI, part of the Open University) undertook this systematic review between September 2006 and May 2007 in response to an invitation to tender from the Department for Innovation, Universities and Skills (DIUS). Thus, the topic chosen for the review was pre-determined and was initially entitled The role of employer engagement in course development and the difference employer engagement makes (to employers and to students). With the agreement of the DIUS, a broad review question was identified: What is the impact of employer engagement in course development?

The review group undertaking the review comprised CHERI staff supported by staff of the EPPI-Centre and officers of the DIUS who advised the group throughout the review. The group also took advice from a 'virtual' Advisory Group at certain stages of the review. How the group worked is described in Chapter 2. Chapter 3 describes the systematic map – the scope and coverage of the research literature. Chapter 4 presents the results of the in-depth review of the findings of a subset of the literature identified. Chapter 5 discusses the strengths and limitations, and the policy implications of the findings of this review.

1.1 Aims and rationale for current review

The aim of the review was to improve our understanding of employers' engagement in higher education (HE) curriculum development and in particular the impact, if any, of that engagement. In doing so, the review was extended to cover aspects of employer engagement in further education (FE), and in particular the development of Centres of Vocational Excellence and Skills Academies in England, to see what lessons might be learned from that experience.

1.2 Definitional and conceptual issues

Given the broad nature of the review topic, an initial review question was agreed as a basis for producing the systematic map. Discussion about the map with the DIUS resulted in a more refined question for the in-depth review focusing on the views and experiences of students and employers in relation to employer engagement in course development. The key definitions are based on discussions within the review group, and with the DIUS and EPPI-Centre. They were intended to provide practical guidance for the scope of the review.

Key definitions

Employer engagement: 'Engagement' refers to a process whereby employers (including employer organisations) work directly with course teams in developing courses. Types of employer engagement might include discussions about skills, qualification and training requirements; employers' involvement in curriculum working groups, designing courses etc.; employers offering students work-based learning opportunities, projects, placements, work experience; provider/employer/learner negotiated programmes to support continuing professional and workforce development etc.

Employer: Our focus was on employers not generally engaged in course development before. Thus, we excluded studies that concerned the main professional occupations, i.e. those that prescribe

(to a greater or lesser extent) the curricula of undergraduate courses leading to a professional qualification, membership or licence to practise and recognised by the relevant professional, statutory and regulatory body (PSRB) – except in the case of foundation degrees. We were interested in studies that focused on individual employers and wider representative bodies, such as the sector skills councils.

Student: We included both full- and part-time students, including 'employees' who were studying a qualification leading to a recognised award.

Course development: A broad definition was used, which covered design, development, delivery and assessment.

Higher education: Studies were included that covered undergraduate qualifications.

Further education: Studies were included that covered level 3 qualifications and above.

Time period and location: Studies included in the review were those published in or after 1987 when the 'Enterprise in Higher Education' initiative commenced, and were reports of research on the UK further and higher education sectors.

Impact: This refers to empirical studies that demonstrate any positive, neutral, and/or negative outcomes that might be experienced by students and employers as a result of employer engagement. (See also Section 1.6.)

1.3 Policy and research background

The involvement of employers in both higher education (HE) and further education (FE) has a long tradition. In HE this tradition includes those courses that lead to a professional qualification or licence to practise and where a work-related component is an important part of the student learning experience. In FE, the sector is characterised by its focus on the (mostly) local provision of sub-degree post-16 vocational education and training qualifications, although increasingly FE colleges are also delivering HE courses.

In simple terms, there is a difference between (i) 'initial' HE (and FE) and work-based learning where students go into the workplace as part of their studies to develop and enhance their learning and skills, and (ii) workforce development where learning tends to be more demand-led and geared towards the specific skills needs of employers and their employees. With the latter, employers will have a direct interest in their employees, as opposed to the indirect interest they have in students in the former category who may or may not be ultimately employed by the employer.

Over the years, successive government policies have been directed towards making HE more responsive to employer demands. While employer demand is taken into account by the HE sector, the ways it is done, the extent to which it is done, and the underlying purposes all vary. These variations will often reflect custom and practice in the particular occupational area, and might also reflect the extent to which particular HE institutions feel the need to respond to government calls for more responsiveness to the needs of employers and the economy.

Brennan and Little (2006) identify three levels of engagement: (i) high, where the employer and provider 'have an equal shared interest in ensuring high standards of education and training to support the initial formation of specialists to work in that employment sector' (p 49), for example the NHS; (ii) medium, where the level of engagement is 'less tightly bound and less comprehensive...where higher education is neither the sole nor preferred choice as provider of continuing professional development for employers' (p 50); (iii) low – where 'there is no overarching strategic drive towards improving links between higher education and business for the learner's initial formation, and little emphasis on continuing professional development for existing employers' (p 50).

Policy pronouncements and reviews since 2000, particularly in the FE sector, have been driving changes to make qualifications and skills more economically valuable to meet the needs of employers and the economy. Initiatives include the establishment of Centres of Vocational Excellence and four White Papers setting out (i) the government's skills strategy (DfES 2003), (ii) the reform of 14–19 education and training (DfES 2005a), (iii) improvements to skills performance by meeting the needs of employers (DfES 2005b), and (iv) the reform the FE sector (DfES 2006a). Added to this is the growth of foundation degrees that is mainly taking place in FE and the proposal in the Further Education and Training Bill (DfES 2006b) for granting FE colleges foundation degree awarding powers. Furthermore, the Leitch Review of Skills (2006) reported on what steps need to be taken to address the poor standing of the UK's skills base at every level (including HE) compared with its main international comparators.

As Brennan and Little (2006) point out, there have been a number of policy pushes for demand-led supply of skills training to create an environment where employer engagement is expected to be the norm for higher education. One of these is lifelong learning networks that have been established to improve progression opportunities for vocational learners into and through higher education. These networks comprise FE colleges and HE institutions and part of their remit is to develop curricula and involve employers. Other developments in the HE sector have emerged in response to the Leitch Review and include the strategy of the Higher Education Funding Council for England (HEFCE) to support links between HE and employers on skills and lifelong learning, which is under development

(HEFCE 2006). Another is the 2007 annual grant letter from the Secretary of State for Education and Skills to HEFCE, which draws attention to the Leitch Review and calls for new approaches 'that make available relevant, flexible and responsive provision that meets the high skill needs of employers and their staff' (DfES 2007).

These developments assume that the engagement of employers with HE, FE and other providers of education and training is good for the economy and benefits everyone that is part of the relationship. Gleeson and Keep (2004) contest this notion. They state that the power relationship between employers and education is an unequal one. Since the 1970s, successive governments have emphasised the need for education to provide what the labour market supposedly needs and employers have been given greater say in educational policy-making at the expense of education. They point to a tension between calls for vocationalism and the need to promote academic excellence. These initiatives also assume that skills are important to the 'competitive success of all employers' (p 46) and that qualifications correlate with skills. Gleeson and Keep argue that 'the vast bulk of learning and skills development taking place in the workplace is informal and almost invariably uncertified...the government's obsession with qualifications is not one that is universally shared by employers' (p 46).

Nevertheless, the expansion of the FE and HE sectors has been accompanied by an increased emphasis on work-related learning and on the employability of graduates. Furthermore, there has been a broadening of the graduate labour market with more employers in new occupational areas recruiting graduates; these employers have less experience of engaging with HE providers than traditional graduate recruiters. Research has shown benefits to students and employers of the links between HE and the labour market, but it is less clear about how effective this employer engagement has been in shaping the HE curriculum (Mason et al. 2003; Brown and Hesketh 2005; Harvey et al. 2002).

Impacts of employer engagement in teaching and learning may be mixed, i.e. both positive and negative, and may be positive for some employers, students and graduates and not for others, and these may be relatively short-lived. Many of the studies about employer engagement are descriptive in nature and say little about impact, for example, on the quality of students' learning experiences and outcomes and whether or not these are enhanced by employer engagement. Any empirical findings will need careful interpretation, especially when considering whether there is any causal relationship between employer engagement in course development and students' learning experiences and outcomes – for example, graduates' success in the labour market.

Mason et al. (2003) found that 'employer involvement in course design and delivery was positively associated with the occupation-based measure of the quality of initial employment found by graduates' (p 7). However, there is a distinction between 'getting a job' and 'doing a job', and the impact of higher education on long-term employment success may be less than anticipated (Brennan 2004). In occupational areas that are not tightly regulated, 'getting a job' is likely to be influenced by institution attended, almost irrespective of subject studied, whereas 'doing a job' might be influenced, at least in the early stages, by 'what' and 'how' students study. Furthermore, there have been more general debates about HE's relationship to the world of work and the extent to which HE is serving a training or (pre-)selection service for employers (Brennan et al. 1996). More specifically, studies have found that employers use sandwich placements as a quasi-selection function (Harvey et al. 1998; University of Manchester 2004).

1.4 Purpose and rationale for the review

The details provided in the invitation to tender from the DIUS were as follows:

> *There are many aspects to the involvement of employers in HE from engagement in sponsoring specific research projects to funding individuals to gain HE qualifications. Clearly there appears to be a buoyant market for graduates, particularly in some key subjects. However, there have been a variety of regular and one-off surveys which have attempted to capture the views of employers about the skills and qualities of graduates. While no clear or constant picture emerges from these, many do indicate that employers are often not satisfied with the 'softer' skills of graduates and that they view them as not being 'ready for work'. The development of Foundation Degrees has emphasised the need for employers to engage more with both the content and delivery of HE and there has been some involvement in the course and curriculum development, including the Sector Endorsed Foundation Degrees in some sectors such as Early Years. We need to improve our understanding of employers' engagement in HE curriculum development. The study might usefully be extended to cover aspects of employer engagement in FE to see what lessons might be learned from that experience.*

1.5 Authors, funders, and other users of the review

The review's direction has come from the DIUS in the form of an invitation to tender for the work. The Centre for Higher Education Research and Information (CHERI) of the Open University was commissioned to undertake the review on the basis of its previous research studies and projects related to the theme of employer engagement in the HE/FE curriculum and graduate skills.

Staff of the EPPI-Centre liaised with the CHERI group and worked on the review. Officers of the DIUS advised the group. Funding came from the DIUS grant to the EPPI-Centre. A 'virtual' Advisory Group commented on the protocol and the draft report.

The key messages of this review may be of particular interest to:

- policy-makers, by highlighting where current policy relevant to employer engagement in course development is supported by research evidence and where there are gaps;
- researchers (and commissioners of research), by highlighting areas where the evidence base is thin;
- practitioners, employers and students interested in the engagement of employers in non-traditional industries/sectors.

1.6 Review questions and approach

The review topic was:

The role of employer engagement in course development and the difference employer engagement makes (to employers and to students).

From this an initial review question was identified to produce the systematic map:

What is the impact of employer engagement in course development?

To move from the systematic map to the in-depth review, the review question was further refined, by selecting a subset of the literature, as follows:

What impact does employer engagement in course development have on employers and students (from the student/employer perspectives)?

In the context of this review and the nature and types of studies that emerged, 'impact' refers to employers' and students' perceptions of impact as opposed to, for example, studies of effectiveness.

CHAPTER TWO

Methods used in the review

Throughout this review the review group used the systematic review methods developed by the EPPI-Centre as described in their guidelines and tools for conducting a systematic review. These were accessed from the Methods and Databases section of the EPPI-Centre website at http://eppi.ioe.ac.uk/cms/Default.aspx?tabid.

2.1 Type of review

Given the time and financial limitations set by the Department for Children, Schools and Families at the onset of the project, it was decided that this review was going to be a 'limited search scoping review (map and synthesis)'. This is 'a quick overview of research undertaken on a (constrained) topic and an overview of the evidence provided by these studies in answering the review question' (Social Science Research Unit 2006, p 6).

In order to undertake a systematic review but to limit the resource expenditure, the following constraints were applied:

- Question: the focus of the question was delimited to *'What is the impact of employer engagement in course development?'* Inclusion and exclusion criteria were applied (see below), which limited the pool of research.
- Search: only two bibliographic databases, the British Education Index (BEI) and the Education Resources Information Center (ERIC), were searched and key terms, rather than extensive searches of all variants, were used.
- Map: a simple descriptive map was produced.
- Data extraction: this was limited to key data and results for simple quality assessment.
- Quality assessment and synthesis: these were kept simple.

2.2 User involvement

Although a 'virtual' Advisory Group was formed at the beginning of the project (see Appendix 1.1 for Advisory Group membership), in practice time constraints greatly limited the opportunities for involvement. Advisory Group members were consulted at the beginning of the review and on the draft final report.

No other user involvement was envisaged for this limited scope review.

2.3 Identifying and describing studies

2.3.1 Defining relevant studies: inclusion and exclusion criteria

For a study to be included in the systematic map, it had to meet a series of inclusion criteria. These were developed by the review group with advice from the EPPI-Centre and agreed by the DIUS. Formal inclusion criteria and the mirror-image exclusion criteria are shown in the figure below.

Inclusion/exclusion criteria were applied systematically to all the studies identified from the searches. Studies were screened by applying the first exclusion criteria that applied to each study, i.e. if it was possible to apply just one exclusion criterion, the study would be excluded without checking whether any of the other criteria were also applicable. A limitation of this approach is that it is not possible to ascertain which of the exclusion criteria is responsible for discarding the largest number of studies. The review followed the Evidence for Policy and Practice Information

Figure 2.1 Inclusion and exclusion criteria

What is the impact of employer engagement in course development?

Inclusion criteria	Exclusion criteria
1. Must focus on employers not traditionally engaged in course development before	*Exclusion on scope* Not one of the main professional occupations – i.e. those that prescribe (to a greater or lesser extent) the curricula of undergraduate courses leading to a professional qualification, membership or licence to practise and recognised by the relevant Professional, Statutory and Regulatory Body. Thus, the main occupations excluded from this review are: accountancy; dentistry; engineering; law; medicine; nursing and midwifery; teaching; and veterinary science (except for foundation degrees where all occupations will be included)
Must cover higher education (HE) (undergraduate qualifications) and/or further education (FE) (level 3 qualifications and above) – at least for the map of evidence	Neither HE and/nor FE (level 3 and above)
3. Must cover engagement in course development of individual employers and/or wider bodies (such as sector skills councils)	Not covering engagement in course development neither of individual employers and/nor wider bodies
4. Must cover research on the UK	Not research on non-UK countries *Exclusion by study type*
5. Must be empirical research	Description Methodology Editorial, commentary, book review Policy document Resource, textbook Bibliography Conceptual studies (i.e. texts which offer ways of conceptualising developments/initiatives), Academic critiques (texts which critique developments/ initiatives)
Must cover research placed in the public domain between 1987 and present	*Exclusion on publication status* research placed in the public domain before 1987

and Co-ordinating Centre (EPPICentre) guidelines. Systematic reviewing tools for conducting a systematic review (EPPICentre, 2003a, 2003b, 2003c and 2003d) Each criterion that applied was recorded on EPPI-Reviewer (EPPI-Reviewer v3 2007).

2.3.2 Identification of potential studies: search strategy

Reports were identified from the following sources: (i) bibliographic databases, (ii) handsearching of key journals, (iii) handsearching of websites, (iv) list of key authors and papers, and (v) personal networks.

i. With regard to electronic searching, the BEI and the ERIC databases were searched using an agreed list of keywords. Conceptually the review group considered the question to be divisible into three areas: (1) terms related to employer engagement; (2) terms related to course development; and (3) terms related to the level at which 1 and 2 take place (i.e. higher and further education). The list of keywords can be seen in the Figure 2.2:

In order to be identified by the database search, a publication had to be relevant to all three areas, i.e. to have at least one term from each column in either its title/abstract, or key words or full text when available. In other words, the connector between the column was an ‘AND’ and not an ‘OR’.

Figure 2.2 Framework for online searching

Terms for employer and employer engagement	Terms for course development	Terms for higher and further education
Business	Course design	Academ*
Commerce	Course development	Advanced further education
Cooperative programmes	Course planning	Centres of vocational excellence
Educational cooperation	Curriculum design	Colleges of further education
Employer	Curriculum development	Colleges of higher education
Employer attitudes	Curriculum planning	Further education
Employer engagement	Programme design	Further education colleges
Employer involvement	Programme development	Higher education
Employer links	Programme planning	Higher education colleges
Employer role		Higher education institutions
Industry		Polytechnics
Industry and further education relationship		Skills academies
Industry and higher education relationship		Tertiary colleges
Partnership		Tertiary education
Sandwich placements		Universities
Work based learning		Universities and colleges
Work experience		Vocational education and training
Work place learning		
Work placements		
Work related learning		
Work related projects		

As we used a British and an American database, the key words listed above were customised to suit each database. The full search strings used for each database is attached in Appendix 2.2.

ii) Ten key journals were identified and all issues from 1987 onwards were scanned for relevant literature. For a list of the journals consulted see Appendix 2.3.

iii) A list of policy bodies whose activities are relevant to the focus of this review was drawn up by the review group. Websites were extensively searched for relevant reports published since 1987. See Appendix 2.3 for a list of websites consulted.

iv) A list of key authors in the area was also drawn up by the review group and searches were conducted on BEI and ERIC. For the full search string see Appendix 2.2.

v) Papers were also identified by the review group members and colleagues in the course of other research activities.

Searches of the above-mentioned sources were limited to studies published in or after 1987 to January 2007. The year 1987 was chosen as it coincided with the beginning of the Enterprise in Higher Education initiative, an initiative originally funded by the then Department for Employment, which aimed to establish and embed the concept and practice of enterprise within universities, and to increase the effectiveness of HE in preparing students for working life (Burniston et al. 1999).

In order to keep track of the studies found during the review at both screening, coding and analysis stages, the EPPI-Reviewer 3.0 database was used (produced and maintained by the EPPI-Centre). This meant that there was no need to set up a separate database system on any other software. Titles and abstracts identified via electronic searching were imported directly into the EPPI-Reviewer database and those identified via handsearching and personal contacts were added to it manually.

2.3.3 Screening studies: applying inclusion and exclusion criteria

Inclusion and exclusion criteria were applied on a first come, first served basis successively to (i) titles and abstracts and (ii) full reports. Full reports were obtained for those studies that appeared to meet the criteria, or where there was insufficient information to be sure, via the Open University photocopy request and inter-library loan systems or by consulting the Institute of Education library. The inclusion and exclusion criteria were re-applied to the full reports and those that did not meet these initial criteria were subsequently excluded.

2.3.4 Characterising included studies

The studies that met all the inclusion criteria at full-text screening were then data extracted using the EPPI-Centre data extraction and coding tool for education studies v2.0 (EPPI-Centre 2006). Sections A–E of the tool were applied to each of the included studies at this stage. Additional keywords specific to the context of the review were developed by the review group, loaded onto the EPPI-Reviewer database and then applied to all included studies. Both sets of keywords are attached in Appendix 2.4.

2.3.5 Identifying and describing studies: quality assurance process

Quality assurance was undertaken at each stage of the screening process as described below.

1. Screening of titles and abstracts

A screening moderation exercise was undertaken with 13 random titles and abstracts. All review group members applied the inclusion/exclusion criteria independently and then compared their results with the whole group. Once consensus was reached, two members of the team screened titles and abstracts of the studies that had been identified and loaded them onto EPPI-Reviewer. No double screening was undertaken at this stage but EPPI-Centre staff undertook some quality assurance.

2. Screening of full papers

Once the full text of potentially relevant studies was obtained, each paper was assessed by at least two members of the review group. In those cases where a consensus could not be reached, a third member was consulted.

3. Data extraction

Data extraction was undertaken by primarily by one team member, but half of the literature identified was double-coded by three members of the group. Comparative reports for the double coded papers were then printed from the EPPI-Reviewer database and any discrepancies in the application of the keywords discussed and resolved before loading the final version onto the EPPI-Reviewer review group page.

2.4 In-depth review

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

After dealing with linked studies and duplications, 28 studies proved relevant to the review question and were therefore included in the systematic map. The studies identified covered a range of topics (e.g. university–industry collaboration, work placements, work-based learning, graduate apprenticeships, live projects, foundation degrees, collaborative partnerships) and a range of purposes were applied using the typology presented in the EPPI-Centre data extraction guidelines (EPPI-Centre 2006) (e.g. 'descriptions', 'what works', 'exploration of relationships', 'methods development', 'reviewing/ synthesising research') .

In order to move from broad characterisation to in-depth review, it was decided, with DIUS agreement, to focus on (1) evaluative research and (2) the impact of employer engagement on students and employers from the perspectives of students and employers.

Thus, the following additional exclusion/inclusion criteria were applied to the 28 studies in the map:

Criterion 1:Is the publication evaluative (i.e.'what works')?

Yes = included

No = excluded

Criterion 2:Does the publication present findings on the impact of employer engagement on students and employers (from the student/ employer perspectives)?

Yes (i.e. students and/or employers) /Yes, partially (findings were at a general/ macro level where the specific object and nature of the intervention were not clear) = included

No = excluded

The application of criterion 1 resulted in 14 studies being excluded from the in-depth analysis as they were not of the 'what works' type. Of the 14 studies left, a further six were excluded because they did not present findings on the impact of employer engagement on students and employers, or present findings from the perspective of employers and/ or students. At the end of this stage of further selection, only eight publications were considered suitable for in-depth analysis.

Two tables presenting the outcomes of the application of criteria 1 and 2 to the 28 studies in the map of evidence are attached in Appendix 2.5.

2.4.2 Detailed description of studies in the in-depth review

Studies identified as meeting the inclusion criteria were analysed in depth, using the EPPI-Centre data extraction and coding tool for education studies v2.0 (EPPI-Centre 2006), sections G–N, and the data extraction was undertaken directly onto EPPI-Reviewer. Two members of the review group data-extracted each publication and EPPI-Centre staff provided some quality assurance.

2.4.3 Assessing quality of studies and weight of evidence for the review question

Three components were identified to help make explicit the process of apportioning different weights to the findings and conclusions of the different studies. Such weights of evidence are based on:

A. the soundness of studies (internal methodological coherence), based upon the study only;

B. the appropriateness of the research design and analysis used for answering the review question;

C. the relevance of the study topic focus (from the sample, measures, scenario, or other indicator of the focus of the study) to the review question;

D. an overall weighting taking into account A, B and C.

When deciding how to judge weight of evidence C, criterion 2 outlined in 2.4.1 above was applied:

- Studies that fully answered the in-depth review question were judged as high.
- Studies that partially answered the in-depth review question were judged as medium.

The weight of evidence (WoE) contributed by each study in the in-depth review was derived through an assessment of each published report by two independent reviewers. Quality assurance was provided by a colleague from the EPPI-Centre. Any discrepancies were discussed until they were resolved. WoE judgements are based on the careful reading and data extraction of each report.

Weight of Evidence A was a measure of the overall soundness of the study in terms of internal methodological coherence. Given that all of the studies in the in-depth review were short on detail particularly regarding the study design and sample and/or the data collection and analysis, we decided to code all as 'low trustworthiness'.

Weight of Evidence B was determined by the research design and analysis used for answering the review question. As noted above, because of lack of detail we coded all the studies as 'low'.

Weight of Evidence C was a measure of the relevance of the study topic to the review question. As noted above, in order to move from broad characterisation to in-depth review, further inclusion criteria were applied, one of which asked the question: does the publication present findings on the impact of employer engagement on students and employers? On further assessment, those that did not answer the question were excluded from the in-depth review. Those that did (i.e. the eight studies) were placed in one of two categories: those that answered the question in full (i.e. findings were presented covering both students and/or employers from the employer/student perspective), and those that partially answered the question because the findings were at a general/macro level where the specific object and nature of the intervention were not clear. Those in the former category were coded 'medium' (six studies); those in the latter 'low' (two studies). See Appendix 2.5 for details of the results of the application of the further inclusion criteria.

Given our lack of confidence in all studies regarding WoE A and B, we decided that those studies with a WoE C that were coded 'medium' should be given an overall WoE D 'medium'; similarly, those studies with a WoE C that were coded 'low' should be given an overall WoE D 'low'. Thus, six studies were given an overall WoE D 'medium' and two 'low'.

2.4.4 Synthesis of evidence

The data were synthesised to bring together the studies which answered the review question, either fully or partially, and which met the quality criteria relating to the soundness of the study methodology, appropriateness of the research design and relevance to the review question. As this was a limited-search scoping review, the synthesis process was kept simple, and focused on the aims of the studies, description of the intervention or programme, study design and sample, results, and conclusion, as well as any data collection and analysis issues. As the studies included did not provide data suitable for statistical analysis, the synthesis is in narrative form.

Through careful reading of each study, specific themes (relating to either one or more study) emerged; these formed our framework for synthesis. The themes were coded against each study, where they applied. The themes and outcomes of the synthesis are discussed in detail in Section 4.5.

2.4.5. In-depth review: quality assurance process

Each of the eight publications selected for in-depth review were data-extracted by two team members. Comparative reports were then printed from the EPPI-Reviewer database, discussed, and any discrepancies in the application of the data-extraction tool resolved before loading the final version onto the EPPI-Reviewer review group webpage.

2.4.6 Deriving conclusions/implications

One member of the review group synthesised the results. The framework for synthesis was the common themes running through the studies. These are discussed in detail in Chapter 4. The draft synthesis was shared and discussed with all members of the review group and amended in the light of these discussions. The draft report was then shared with members of the Advisory Group, DIUS and EPPI-Centre, who provided further comments for consideration by the review group. The report was also externally peer reviewed.

CHAPTER THREE

Identifying and describing studies: results

This chapter focuses on the systematic map, i.e. a descriptive report of the types of studies that were found that are relevant to the initial research question. Section 3.1 describes studies included from searching and screening, Section 3.2 summarises the characteristics of the included studies and Section 3.3 describes the quality assurance process undertaken by the review group.

3.1 Studies included from searching and screening

Figure 3.1 presents a stage-by-stage summary of the process of filtering the large pool of literature initially identified through to the systematic map and in-depth review stages.

A total of 3,974 citations were identified through searching the BEI and ERIC databases. As ERIC is a much larger database, it returned the largest yield of citations: 3,809 citations as opposed to 165 from BEI. Once duplicate entries were eliminated, 3,944 titles and/or abstracts remained on the EPPI-Reviewer database. These were screened using the exclusion criteria described in Section 2.3.1 and also attached in Appendix 2.1. As mentioned in 2.3.1, studies were screened by applying the first exclusion criteria that applied to each study; this means that it is not possible to ascertain which inclusion criteria resulted in the largest numbers of studies discarded overall. Of the ones that were applied, however, the first most common exclusion criterion was criterion 4, 'Research on non-UK countries'. This is not surprising given that ERIC is an American database also containing much international literature. The second most common criteria for exclusion was criterion 3, 'Research not relevant to employer engagement in course development', followed by criterion 5 , exclusion by study type ¬– i.e. 'non-empirical research'. This is also unsurprising as the electronic databases consulted include not only research but other types of literature such as course manuals, policy papers, or guidelines. The three remaining criteria (type of occupational area/employment sector, HE and/or FE level 3 plus, and publication date) were also used, but less extensively, as can be seen from Figure 3.1.

The initial screening of titles and abstracts yielded 142 papers potentially relevant to our review. Another 75 papers were identified via handsearching of relevant journals and websites and through personal networks. After excluding duplicates, 210 papers went through to the full-text screening stage. Full texts of identified citations were obtained via the OU photocopy requests and inter-library loan services or, when this did not yield results, the Institute of Education library. This retrieval strategy was very successful and by early January 2007 we had obtained all the full-texts of the 210 potentially relevant papers.

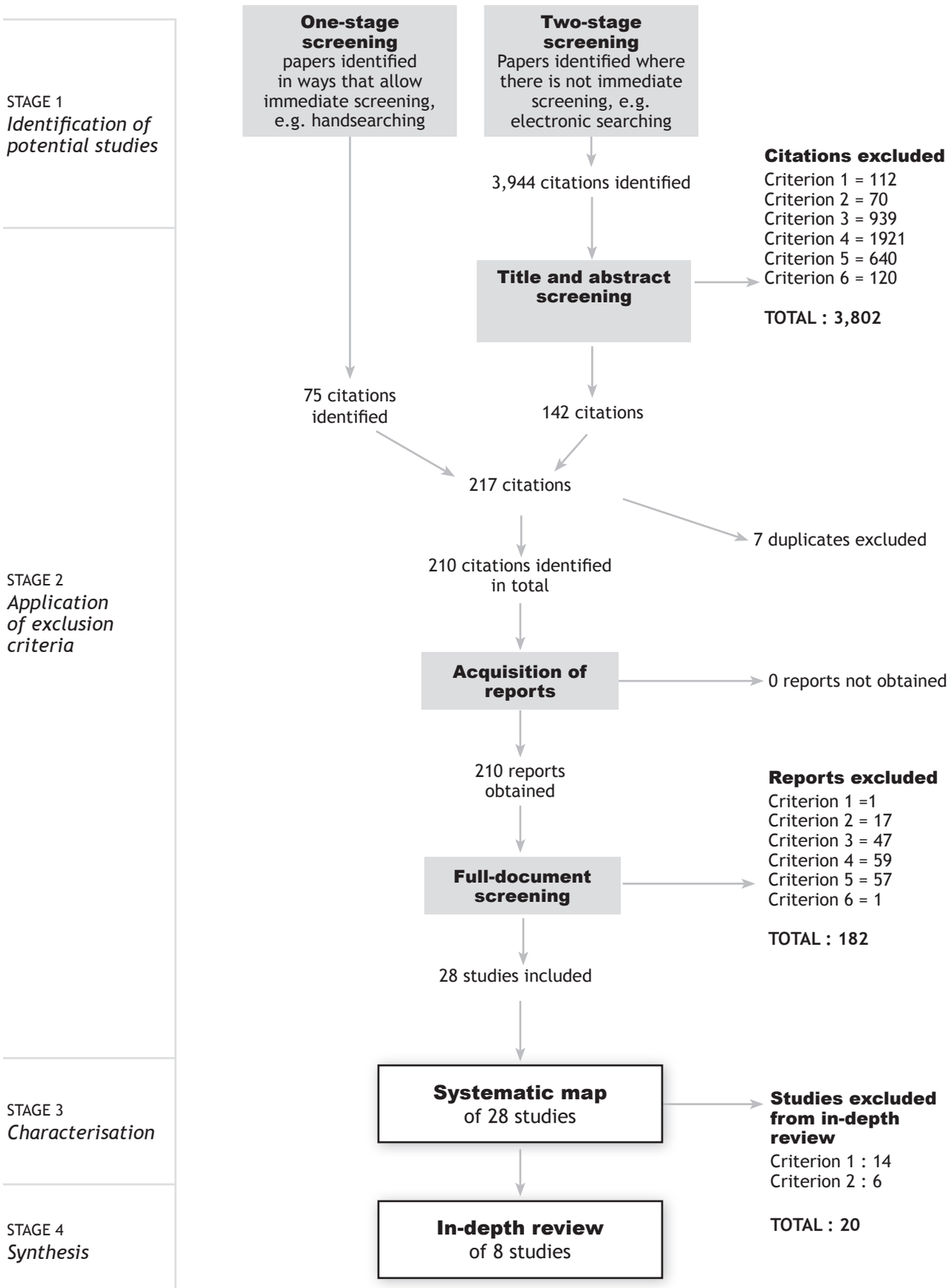
Exclusion criteria were then re-applied and 182 were discarded. The most common criterion for exclusion at this stage was again 'Research on non-UK countries' followed very closely by 'non-empirical research', as many turned out to be of a descriptive nature.

In the end, 28 publications were included in the map. The vast majority of these were initially identified through handsearching or personal networks, with only three of the citations originally identified via BEI/ERIC being included in the systematic map (with another two being relevant 'linked studies' to the three previously mentioned).

3.2 Characteristics of the included studies (systematic map)

The 28 studies included in the map have been analysed using section A–E of the *EPPI-Centre data extraction and coding tool for education studies v2.0* (EPPI-Centre 2006) and a set of review-specific keywords (both attached in Appendix 2.4). The description which follows is based on the data

Figure 3.1 Filtering of papers from searching to map to synthesis



extracted with those tools. This section provides just a snapshot of selected aspects of the studies included. A full version of the systematic map can be found in Appendix 3.1.

As can be seen from Table 3.1, the 28 studies are quite wide-ranging in terms of research purposes, but half of them are of an evaluative nature, i.e. they aim to measure the effectiveness or the impact of a specific intervention or programme on a defined sample of recipients of the programme or intervention. A sizeable subset consists of (i) publications of a descriptive nature, i.e. studies which aim to produce a description of a state of affairs or a particular phenomenon and to document its characteristics, and (ii) publications reviewing or synthesising existing research. Although not all these categories are mutually exclusive (in particular, 'description' often occurs alongside other categories), it is to be noted that none of the studies coded as 'what works' is also an 'exploration of relationships'.

Table 3.1 Purpose of the study (N=28)

Attribute	Number
A: Description	8
B: Exploration of relationships	4
C: What works?	14
D: Methods development	1
E: Reviewing/synthesising research	6

(These figures are not mutually exclusive. This applies to all but table 3.5 in this chapter.)

With regard to the type of employer engagement at the centre of the studies, it has already been made clear in Chapter 1 that the review group adopted a broad definition of course development including design, development, delivery, and assessment. At the same time, however, the emphasis on course development deliberately excluded from the review other types of engagement such as membership of advisory boards or technology transfer activities. This should be borne in mind when looking at the different types of employer engagement that are the subject of the studies in the systematic map and are reported in Table 3.2 below.

Table 3.2 Types of employer engagement in course development (N=28)

Attribute	Number
Curriculum design	22
Curriculum development	17
Assessment of students	10
Quality assurance and review	3
Whole of course	9
Part of course	14
Other	4
Not specified	2

A breakdown of the educational settings of the studies at Table 3.3 shows that the majority of engagements take place in higher education institutions, followed, in almost equal shares, by the workplace and post-compulsory education institutions (mainly further education colleges).

Table 3.3 Educational setting(s) of the study (N=28)

Attribute	Number
Government department	1
Higher education institution	26
Local education authority	1
Post-compulsory education institution	14
Workplace	16
Other educational setting	4

As Table 3.4 shows, the type of impact (based on the perceptions of those participants involved in the studies – students, employers, academics) that employer engagement activities have is fairly evenly spread between impact on students and employers, although a significant minority of studies look at the impact on the institution as a whole and academics in particular.

Table 3.4 Type of impact (N=28)

Attribute	Number
On students	20
On graduates	8
On employers	17
On the institution	11
On academics	7
On administration	1
Other	1
Not specified	3

Finally, qualification aimed for is shown in Table 3.5. The predominance of foundation degrees is a consequence of (i) the intrinsic nature of this qualification, a core feature being the involvement of employers in the development and delivery of the courses, and (ii) the brief from the Department for Innovation, Universities and Skills (DIUS) for this systematic review, which asked the review group to look in particular at foundation degrees. The coding on the type of qualifications is mutually exclusive, but because several publications focused on different types of qualifications, the numbers do not add up to 28.

Table 3.5 Educational setting(s) of the study (N=28)

Attribute	Number
First degree	10
Foundation degree	12
Other HE qualification at undergraduate level	7
HE but not specified	3
FE level 3 qualification and above	3

The following definitions are given to clarify the qualification terminology used:

- First degree: an undergraduate degree such as Bachelor of Science or Bachelor of Arts at level 6 of the Higher Education Qualification Framework
- Foundation degree: a vocational higher education qualification positioned (level 5) between the Higher National Diploma and Bachelor of Science/ Bachelor of Arts level of education. Courses are typically two years long and are offered both by universities and colleges of higher education
- Other higher education (HE) qualifications at undergraduate level: these are, for example, the Higher National Certificate (level 4), Higher National Diploma, Diploma in Higher Education (level 5)
- HE but not specified: this category was used when there was insufficient information in the publications to identify a specific higher education qualification

Further education level 3 qualification and above: qualifications obtained in the further education sector which are at a level comparable with higher education qualifications, for instance BTEC National Diplomas, Certificates and Awards (level 3), BTEC Professional Diplomas, Certificates and Awards (levels 4–6), BTEC HNDs and HNCs (level 5)

3.3 Identifying and describing studies: quality assurance results

The quality assurance mechanisms adopted to ensure consistency and accuracy in applying inclusion/exclusion criteria to the process of identifying and describing studies is explained in detail at paragraph 2.3.5.

Quality assurance was undertaken at each stage of the screening process: (i) screening of titles and abstracts; (ii) screening of full papers; and (iii) data extraction.

The data-extraction of stages A–E of the EPPI-Centre tool and the review-specific keywords was undertaken primarily by one team member, but half of the literature identified was double coded by one of three members of the group. Comparative reports for the double coded papers were then printed off the EPPI-Reviewer database and any discrepancies in the application of the keywords discussed and resolved before loading the final version onto the EPPI-Reviewer review group webpage.

CHAPTER FOUR

In-depth review: results

This chapter explores the results of a subset of the studies in the systematic map. It asks the question:

What impact does employer engagement in course development have on employers and students (from the employer/student perspectives)?

4.1 Selecting studies for the in-depth review

Eight studies were identified for the in-depth review and are shown in Box 4.1. These studies were selected from those in the systematic map by further focusing the review question and thereby applying additional inclusion criteria. These criteria comprised studies that:

- were evaluative (i.e. 'what works'), and
- presented findings on the impact of employer engagement on employers and students from the employer/student perspectives.

The eight studies are described in detail in Appendix 4.1.

4.2 Comparing the studies selected for in-depth review with the total studies in systematic map

The studies selected for the in-depth review emerged after application of additional criteria outlined above in Section 4.1, i.e. studies that were (i) 'what works' and (ii) presented findings on the impact of employer engagement on employers and students. In applying the latter criterion we allowed for studies that included findings on both employers and students from the employer and/or student perspectives. We also included some studies that, while answering the review question, did so in an ambiguous way in that the findings were at a general/macro level, which made it impossible to identify the object and nature of the intervention (for example the occupational area).

Box 4.1 Studies in the in-depth review

Greenbank (2002) Undergraduate work experience: an alternative approach using micro-businesses

Hillier and Rawnsley (2006) Education, education, education of employers, education and equity: managing employer and employee expectations of foundation degrees

Kinman and Kinman (2000) "What's that got to do with making motor cars?" The influence of corporate culture on in-company degree programmes

Leslie and Richardson (1999) Work placement in UK undergraduate programmes. Student expectations and experiences

The Quality Assurance Agency for Higher Education (2005) Report of a survey to follow up foundation degree reviews carried out in 2002-2003

Thomas and Busby (2003) Do industry collaborative projects enhance students' learning?

Thomas and Grimes (2003) Evaluating the integration of key skills and NVQs into an undergraduate degree programme: a case study from the graduate apprenticeship initiative

York Consulting (2004) Evaluation of foundation degrees: final report

4.3 Further details of studies included in the in-depth review

Greenbank (2002) looked at the use of micro-businesses for undergraduate placements on business and management courses and the experiences of placing first year students in these businesses. The intervention consisted of a work-based project for a local organisation during a three-week period with the aim of encouraging students to link theory and practice and to enable them to develop their transferable skills.

The study reports on two case studies of student placements in micro-businesses – a printer and a video store - comprising two groups of four Year 1 students. Semi-structured interviews and informal discussions were held before, during and after the students' work experience with the individual students, the groups of students and the placement providers. Direct observation by the author was also undertaken. Each student was required to produce a written piece of work on their experience.

The students' experience with the printering business was negative and the author notes that this experience may have reinforced the negative views they held of such businesses prior to their placement. Similarly, the owner-manager had a negative experience and, as noted by the author, this may have put him off contributing student placements and employing graduates in the future. The negative experience was due to the owner-manager having little understanding of how to manage the process of applying formalised methods to resolving business problems.

In contrast the video store owner-managers had a positive experience; they trusted the students and allowed them flexibility, and were very pleased with the outcomes, which were having positive effects on the business. The students were pleased to see their ideas being implemented and they felt they had learned from the placement. The author notes that there was evidence of 'expansive learning', which means that the students were adapting their existing knowledge and skills to meet the needs of the new situation.

The author concludes that the case studies help to illustrate the importance of the mediating role of the academic tutor. This is particularly so in terms of pre-placement briefings for both students and work experience providers to help mitigate against the expectation that students on placements can provide an immediate contribution to problems with little direction or assistance. The author suggests there is a need for further research into how micro-businesses use graduates and manage work experience, how skills are developed, and how they become transferable.

For this review, the study was rated medium for the relevance of the study topic to the review question, given the focus on students' and owner-managers' expectations and experiences of work placements.

Hillier and Rawnsley (2006), through a case study, explored one specific form of work based learning, a foundation degree in public service management, and how to engage employers in work-based learning programmes. Research questions focused on the expectations of employers and students and whether they are met; and on the inhibiting and enabling factors that help students achieve their expectations and outcomes.

The study comprised an evaluation of the effectiveness of the programme in meeting employers' and students' aims. This was carried out through two questionnaires, one to the students and another to the employers involved in the first five cohorts. The questionnaire aimed to identify what outcomes they wanted to achieve prior to the programme and what was achieved. Interviews with employers were carried out to test out the emerging themes, although no details of the interviews are provided in the report.

Employers were asked how well their employees engaged with their organisation, what their own involvement was in the programme, and what involvement in the programme they would find helpful. The students/employees were asked what specified learning aims they wanted to achieve at the start, how much progress they had made, and what other outcomes had occurred from undertaking the programme.

All but one employer response identified that the outcomes had been achieved by their employees. The main outcomes achieved and mentioned by employers were: employees' skills had improved; they had become more confident; they had improved their ability to manage and communicate; and they had become more knowledgeable.

The employees' perspectives reinforce the employers' perceptions. Employees cited rising confidence, increased knowledge, earning respect from colleagues and credibility in the organisation as outcomes of the programme. A wider awareness of public sector management, political issues, strategic planning, background and context were particularly cited.

The authors point to a 'polarization of experiences': some students were fully supported by their managers while others felt they were envied by their line managers or that their employers did not give them the opportunity to apply what they had learnt. Generally, employers were not able to be or not interested in being fully engaged in the programme, the main reasons being time and work pressures.

For this review, the study was rated medium for the relevance of the study topic to the review question, given the focus on employers' and students'/ employees' perspectives of learning outcomes, and to some extent how far employers wish to be

engaged in programmes of this nature.

Kinman and Kinman (2000) explored the in-company education experiences of a group of managers from a major UK motor manufacturer and the difficulties these participants faced as students in the context of the corporate culture. Participants – 18 middle and senior managers – were following a general business studies degree programme delivered in-house by the University of Luton in partnership with the company. The programme had been adapted to meet the company's needs. A characteristic of the participants was their limited experience of higher education in contrast to their extensive experience of technical and managerial training, mostly by company personnel.

The aim of the case study was to evaluate the programme and the experiences of the participants and the academic staff involved. Little information is provided on data collection and analysis except for references to transcripts of semi-structured interviews conducted with all participants.

Several difficulties in delivering a degree programme in-company are reported. Academic staff had to grapple with company culture and found it difficult to break in to the powerful and cohesive groups and understand their language and behavioural norms. Conversely, participants had difficulties with the use of academic language in the delivery of the curriculum. From the academic staff's perspective, the participants were obsessed with assessment grades and achievement, and their approaches to learning were instrumental and 'surface'. The absence of a student culture and the lack of opportunity to exchange views with other groups of learners compounded the group's insularity and reinforced their narrow vision. Course delivery was continually interrupted by work roles.

The authors suggest that the benefits of in-company education may not be felt unless attention is paid to the linking of education and workplace activity in the context of the influence of a powerful corporate culture. It is suggested that those involved in delivering such provision should not abandon the benefits of off-site delivery but might consider other models such as weekend programmes, delivery in different host companies and occasional seminars on university premises.

However, the participants in the study felt that they had improved management and decision-making skills, were better able to cope with change, had gained in confidence and felt able to deal with the younger graduates who report to them and the colleagues and line managers who already had academic qualifications. Most also recognised the need to 'break free of the introspection that pervaded the degree programme' (p 21) even though the company culture prevailed.

For this review, the study was rated medium for the relevance of the study topic to the review question, given the focus on students'/employees' approaches to learning and assessment in a company culture.

Leslie and Richardson (1999) investigated (i) the expectations and experiences of students studying tourism management degree programmes and undertaking a year-long period of supervised work experience (SWE); (ii) the approaches to the management and administration of Supervised Work Experience (SWE) by academic departments; and (iii) the involvement and attitude of employers.

Eight departments offering tourism management degrees took part in the survey (of a possible eleven). Pre- and post-work experience students, industrial tutors and employers were surveyed via a questionnaire. The survey of the last two groups was supported by personal interviews. The numbers in the sample were: 189 pre-work experience students; 106 post–work experience students; and 8 industrial tutors. The number of employers is not mentioned.

The results of the study focus on the general benefits and expectations of supervised work experience (SWE) to students. Only a minority (39%) had a work experience programme in advance of commencing their placement (i.e. a programme formulated by the employer that clearly defines 'when and in which areas of the organisation the student is to be involved', p 145). A majority (72%) of post-placements felt that a defined set of objectives should have been established for their SWE; 45% did not receive a formal period of induction and even fewer received formal training. A cause for concern is that almost half of students felt the quality of their SWE to be adequate or worse. There was limited opportunity to develop skills in information technology, presentation and writing; positions on offer tended to be orientated towards customer operations. The payment students received led the authors to conclude that students are often exploited and employed in low-skill areas. Another area that caused concern to the authors is that a quarter of students did not receive a visit from their tutor and less than a third received two visits during their placement of twelve months. The authors conclude that there has been little progress since an earlier study. The discrepancies between the perceptions of pre-SWE students and their actual experiences indicate that anticipated benefits are often not realised.

In terms of employers, there was a perception that some academic departments had poor approaches to liaison with employers, which influences the quality of the employer's participation. The survey found that over a quarter of the employers did not liaise directly with the industrial tutor. It also found that there were limited opportunities for students to gain supervisory/managerial experience, which the authors felt reinforced the view that many employers are only interested in what the student can do for them rather than the knowledge he or she may be able to offer.

The authors conclude that there is substantial under-achievement in that SWE is failing to provide a range of experiences, opportunities and benefits to students, and to the other partners. The problem lies with the way in which SWE is managed.

For this review, the study was rated medium for the relevance of the study topic to the review question, given the focus on students' and employers' perspectives of SWE.

The Quality Assurance Agency for Higher Education (2005) undertook a survey of 34 foundation degrees (FDs) to find out how they had developed since they were first surveyed in 2002–03. The study covered a broad range of aims, which included identifying developing practice in work-based learning (WBL) and considering the integration of academic studies and WBL. Key questions used as the framework for the review (and specific to this systematic review question) were 'what is the educational context (including consortia) of the programmes under review, how have the programmes evolved, and what level of employer engagement has there been?'

The study comprised a survey of the 34 FDs reviewed in 2002–03 using a self-completion questionnaire; analysis of the 2002–03 review reports and student data; and a discussion group comprising representatives of consortia, employers and students (no details of numbers are provided).

The report notes that in some of the reviews students had reported that it was the close relationship between their employment and the particular programme that had encouraged them to enrol, whereas before they would not have considered taking a HE qualification. It goes on to note that FD students benefit from working with employers. Examples of the ways in which employers contribute to programmes include: live projects; providing formative assessment and feedback on such assignments; the demonstration of work-related skills; the application of theory to practice; maintaining the currency of the curriculum; and assisting with staff development.

Effective FD schemes all involved significant elements of practical application. What made them effective were definitions and descriptions of the rationale and arrangements for WBL; providing opportunities for employers to meet each other and programme staff to clarify the aims and purposes of the FD and WBL; employing an administrator to organise WBL; providing briefings for employers; having a three-way agreement about the responsibilities of the academic provider, employer, and student to ensure that all three parties understand their roles and the aims and outcomes of WBL.

Co-operation between FD providers and employers varies in terms of the size of employer. With major employers and where there are industry standards and/or qualifications, effective WBL occurs with the co-operation of the employment sector. With SMEs the situation is more varied. While co-operation is often effective, it can be time consuming because of the large number of employers involved.

Examples of good practice that contribute to achieving WBL outcomes include the realism of the activities; students being able to manage their own learning and bring their academic learning and key skills to bear on the WBL activity; the use of employer-designed projects and case studies; the input of employer comment and feedback; the imaginative contribution of employers; and presentation by students to the employer about the project set by the employer.

The report notes that students benefit most from employer involvement when employers are consulted about the programme at the planning stage, and are involved in the design stage and its regular monitoring and enhancement thereafter. Other benefits accrue from employer involvement in specifying the outcomes for, and the supervision of, periods in work; and the design and marking of assignments, and the delivery of the programme. Information about the programme for employers should be clear and avoid the use of unnecessary educational terms. Other benefits include three-way agreements and the maintenance of effective liaison between employers and the academic team.

The main conclusion is that the majority of providers have effective working relationships with employers and that employers, while willing to contribute to the programme design stage, may find continued involvement more difficult. In particular there are challenges for educational providers working with SMEs.

For this review, the study was rated low for the relevance of the study topic to the review question, given that the findings were at a general/macro level, which meant it was not possible to identify the occupational areas under review.

Thomas and Busby (2003) investigated the use of live projects in the teaching of undergraduate programmes, and the expectations and perceptions of industry partners, tutors and students involved with these projects at Birmingham College of Food, Tourism and Creative Studies. Live projects aim to give students the opportunity 'to work with "real life" business problem situations' (p 226) and are formed through an industry-education partnership. Each industry partner writes a brief and groups of students devise specific objectives relating to the situation and design and undertake the research process. Tutors facilitate the running of the projects.

Data were collected from three sources. First, questionnaires (256) were administered to all second-year degree and higher national diploma students in the College who had just participated in and completed a live project, about their experiences in relation to the perceived usefulness

of the live project and the value of the acquired skills to employers. The questionnaires were distributed to students at the end of a lecture, resulting in 141 usable questionnaires, a response rate of 55%. Second, data were collected from a focus group of eight tutors who discussed their role and experience in the co-ordination and facilitation of student work. Third, in-depth semi-structured interviews were conducted with three different industry partners who had set the live project briefs and had received the completed reports and presentations.

The industry partners identified free consultancy, improved public relations, fresh approaches to problem solving and realistic recommendations as the overall benefits of the live projects. For tutors, the benefits included working as a team (with students and industry partners), gleaning insights into the workings of an organisation, opportunities for further work with industry partners, and positive publicity for the College. For the students, the majority reported enjoyment in participating and that they had gained new skills as well as developing existing ones. All felt that the skills developed through the live project experience would be of great value to future employers. The most rewarding experiences perceived were the teamwork and the production of results.

The authors conclude that the live projects are a valuable experience for all involved: industry gains new ideas and potential solutions to problems; students develop new and enhance existing skills; and tutors update their industrial knowledge and build partnerships with industry. On the negative side, the authors suggest it is difficult to prove that students have made the transition from dependent to independent learning because of the constrained environment of the live project and the large size of the student groups.

For this review, the study was rated medium for the relevance of the study topic to the review question, given the focus on 'live projects' and their impact on both students and industry partners (as well as tutors).

Thomas and Grimes (2003) report on an evaluation of the design and implementation of the first year delivery of a graduate apprenticeship programme in hospitality management at Birmingham College of Food, Tourism and Creative Studies. The pilot graduate apprenticeship is premised on the philosophy that an academic qualification needs to be complemented by key skills and NVQ units to produce an effective manager or technical specialist. The aim of the study was to identify the main outcomes for students who are people in employment completing the taught elements of a course on a part-time basis; the process of integrating key skills and NVQs into an existing programme; the added value to the student learning experience; and the benefits and challenges of integrating key skills, an HE award and NVQs, from the students', employers' and institution's perspectives.

Questionnaires were designed and administered to the pilot cohort of seven students midway through the academic year and at the end to collect qualitative and quantitative data. Semi-structured interviews with employers were undertaken in the workplace to investigate employers' views on the amalgamation of skills-based training with academic study. In addition, meetings and interviews were held with the graduate apprenticeship programme managers. However, no further details are provided in the report about the interviews and meetings with employers and programme managers.

From the students' perspective it was felt that the programme offered a significant and worthwhile learning experience. The students appeared to appreciate the role of key skills in improving personal, problem-solving and communicative skills, although there was some appreciation of certain skills over others. In terms of NVQs, students in general felt they added significant value to their learning experience – specifically, for example, in terms of skills portfolio, formal recognition of competency in key work-related skills, confidence in management skills. Of the challenges, the main one for students appeared to be the workload.

From the employers' perspective, there was recognition of employees' personal commitments and family-related sacrifices in undertaking the graduate apprenticeship. However, they felt that the mix of key skills, NVQs and academic qualification added value to the programme, and produced a programme of study with greater work relevance. It was also felt to be a valuable route to enhancing personal and professional development, and any additional staffing costs incurred through participation in the graduate apprenticeship were outweighed by the long-term benefits of continuing professional development.

From the programme managers' perspective, there have been challenges in rewriting simpler NVQ unit specifications and synchronising the different delivery and assessment requirements of the separate elements.

Despite these difficulties, there were a number of benefits: the greater interaction between theory and practice, and the ability to adopt reflexivity in the learning process. One of the main outcomes was high performance by all the apprentices across the different elements of the programme. The students seemed to manage the workload and recognise the benefits of completing a programme that integrates skills-based training and work-based learning into academic study with guidance and support from their tutors and employers.

The authors conclude that the development of the relationship between the employer and the institution needs careful management. Employers

need to contribute to the learning environment through its creation and management. Thus, in order to achieve the goals of students, industry and education, the relationship needs to develop a reciprocal approach. The authors suggest that in developing similar programmes, consideration should be given to the sequence in which programme elements are delivered. In this case study, there was value in completing most of the key skill work at the beginning of the programme and delaying the introduction of NVQ until after most of the degree had been completed. By doing this, programme managers felt that a 'continual improvement loop' had been facilitated.

For this review, the study was rated medium for the relevance of the study topic to the review question, given the focus on students' and employers' perspectives of the student experience of a day-release/work-based learning programme.

York Consulting (2004) undertook a study to provide an early insight into foundation degree (FD) activities to inform policy. The study aimed to find out the current nature and range of FDs; the characteristics and attitudes of current FD students; and the extent to which FD activities were contributing to the achievement of the FD objectives.

The study comprised of initial mapping using secondary data analysis of publicly available statistics, a student survey using a self-completion questionnaire (841 useable questionnaires were returned), case studies of 15 institutions (involving 68 interviews with senior staff, programme leaders/course directors; FD students and lecturers, tutors). No employers were surveyed.

From the survey results, students report that the main benefit of the work-based learning (WBL) element of the FD is that it enables a linkage between theory and practice. The problems reported fall into three categories: difficulty of organising a placement; not enough WBL; and the WBL having little or limited relevance to their studies or employment. However, the majority (73%) felt that they had been able to shape their own learning. There was some concern from students about how the FD is perceived and understood by employers and how it will impact on future career prospects.

The report notes that the vast majority of FDs had effective employer involvement, although the level and manner was varied. Some employers are easier to engage than others because of the nature of the subject matter (e.g. public sector employers), and there is evidence of good practice in engaging employers, for example through employer networks, public sector bodies and stakeholder groups, as opposed to approaching individual employers. Barriers to engaging employers fall into three categories: lack of interest from employers; lack of understanding of the FD and its potential benefits to the organisation; and difficulty in engaging small and medium-sized enterprises (SMEs). On the other hand, the more FDs are custom-built for employers, the greater the employer involvement in the design.

The report concludes that employer involvement is mixed. It also states that it is essential that employers are involved in the design, development, delivery and regular review of programmes. One of the main areas where employer involvement needs to improve is in student assessment procedures.

For this review, the study was rated low for the relevance of the study topic to the review question, given that the findings were at a general/macro level, which meant it was not possible to identify the occupational areas under review.

Full details of the eight included studies are contained in Appendix 4.1.

Among other things, inclusion criteria took account of studies published in or after 1987. Of the studies included in the in-depth review, all have been published since 1999, with the most recent being 2006. Table 4.1 provides details of the intervention, outcomes measured (i.e. impact on students and/or employers), the study design, and occupational area.

4.4 Weight of evidence for studies included in the in-depth review

4.4.1 Calculation of weight of evidence (WoE)

We decided that each study's relevance (WoE C) would determine the overall WoE (D). Thus, those studies with a WoE C that were coded 'medium' were given an overall WoE D 'medium'; similarly, those studies with a WoE C that were coded 'low' were given an overall WoE D 'low'. This resulted in six studies with an overall WoE D 'medium' and two 'low' (see table 4.2).

4.5 Synthesis of evidence

The data were synthesised to bring together the studies that answered the review question and met the quality criteria relating to the soundness of the study methodology, appropriateness of the research design and relevance to the review question. As this is a limited search scoping review, the synthesis has been kept simple. As the studies included did not provide data suitable for statistical analysis, the synthesis is in narrative form and focuses on the type of outcomes (i.e. impact on students and/or employers from the student/employer perspectives) as a framework for synthesis.

The framework for synthesis is based on the themes relating to perceptions of impact that cut across a number of the studies. These have been identified as:

Table 4.1 Types of outcomes measured in the in-depth review)

Study	Intervention	Outcomes measured	Study design	Occupational area
Greenbank (2002)	Undergraduate programme Institution-specific	Use of micro-businesses for undergraduate placements, and in particular students' and placement providers' expectations and experiences	Case study	Business and management
Hillier and Rawnsley (2006)	Foundation degree Institution-specific	Expectations and experiences of employees/ students and employers involved in work-based learning programmes – specifically, a foundation degree	Case and views study	Public sector management
Kinman and Kinman (2000)	Undergraduate programme Institution-specific	Attitudes of managers to in-company education; the effects of company culture on learning	Case and views study	Business studies
Leslie and Richardson (1999)	Undergraduate programme Sector-wide	Expectations and experiences of students on tourism management degree programmes, specifically the supervised work experience element	Views study	Tourism
QAA (2005)	Foundation degree Sector-wide	Development of foundation degrees since the initial survey	Views and document study	Various
Thomas and Busby (2003)	Undergraduate programme Institution-specific	Expectations and perceptions of industry partners, tutors and students to live projects	Case-control and views study	Hospitality and tourism
Thomas and Grimes (2003)	Graduate apprenticeship Institution-specific	Evaluation of the design and implementation of the first year of a graduate apprenticeship programme; benefits and challenges to students, employers and the programme team	Case and cohort study	Hospitality management
York Consulting (2004)	Foundation degree Sector-wide	Foundation degree activities	Case and view study, secondary data analysis	Various

Table 4.2 Calculation of weight of evidence (WoE)

Study	Weight of evidence A: The overall soundness of the study based on internal methodological coherence	Weight of evidence B: The appropriateness of the research design and analysis used for answering the review question	Weight of evidence C The relevance of the study topic focus to the review question	Weight of evidence D: Overall weight of evidence An overall weighting taking into account A, B and C
Greenbank (2002)	Low trustworthiness	Low	Medium	Medium
Hillier and Rawnsley (2006)	Low trustworthiness	Low	Medium	Medium
Kinman and Kinman (2000)	Low trustworthiness	Low	Medium	Medium
Leslie and Richardson (1999)	Low trustworthiness	Low	Medium	Medium
QAA (2005)	Low trustworthiness	Low	Low	Low
Thomas and Busby (2003)	Low trustworthiness	Low	Medium	Medium
Thomas and Grimes (2003)	Low trustworthiness	Low	Medium	Medium
York Consulting (2004)	Low trustworthiness	Low	Low	Low

- Benefits of work-based learning to students
- Benefits of work-based learning to employers
- Management of work-based learning
- Realism of work-based learning activities
- Staff development
- Barriers to engaging employers
- Size of employer organisation

(Note: in the discussion to follow, work-based learning (WBL) has been used as a generic term to cover the various interventions explored by these studies in relation to employer engagement – live projects, in-company education, supervised work experience, work placements).

4.5.1 Benefits of work-based learning to students

The majority of studies have demonstrated the benefits of WBL to students and a number report students gaining new and improving existing skills as a result of WBL. The exception is Leslie and Richardson's study (1999) of supervised work experience (SWE) in tourism management degree programmes; this study found that students' anticipated benefits of SWE were not often realised and that the problem lay in the way SWE was managed by departments. Of the studies highlighting the benefits to students, new and improved skills were identified in a range of personal, problem-solving and communicative skills, (Thomas and Grimes 2003, Thomas and Busby 2003). Hillier and Rawnsley (2006) cite increased confidence and knowledge, and greater respect from colleagues and credibility in the employing organisation as the benefits experienced by the students in their study. Greenbank (2002) refers to 'expansive learning' where the students on placement in a micro-business were able to adapt their existing knowledge and skills to meet the needs of the situations they faced.

Other benefits include the capacity for WBL to help students manage their own learning. The QAA study of foundation degrees (2005) identified this ability and the extent to which students could bring their academic learning and key skills to bear on WBL activity as an example of good practice in achieving WBL learning outcomes. The York Consulting survey of students also on foundation degrees (2004) found that 73% felt they had been able to shape their own learning throughout their programme of study.

The QAA study refers to the benefits to students in relation to the effective contribution of employers, which can take the form of live projects (the benefits of which are reported in Thomas and Busby 2003), the provision of formative assessment and feedback, the demonstration of work-related skills, the application of theory in practice, and updating the curriculum. Putting into practice what has been learnt in the classroom is one of the main benefits of the work-based element of foundation degrees reported by students in the study undertaken by York Consulting.

Of the study exploring an in-company education programme (Kinman and Kinman 2000), the benefits experienced by the participants included improved management and decision-making skills, enhanced ability to cope with change, greater confidence, and confidence in dealing with younger graduates, peers and line mangers who already possessed academic qualifications.

4.5.2 Benefits of work-based learning to employers

Benefits experienced by employers of students/ employees being involved in WBL of various forms included the recognition by employers that skills had improved (Hillier and Rawnsley 2006). This is echoed by Thomas and Grimes (2003), whose study with employers showed they felt the programme was 'a valuable route to enhancing the personal and professional development of their employee' (p 390). It also enabled the fusion of key skills, NVQs and a degree qualification, which added value and produced a programme with greater work-relevance.

4.5.3 Management of work-based learning

A number of studies raised issues about the management of WBL. One of the problems associated with WBL from the student perspective is difficulty in organising a placement and lack of support from the institution (York Consulting 2004). The findings from Leslie and Richardson's study (1999) demonstrated a number of negative impacts. This study looked at the management of supervised work experience (SWE) of tourism management degrees. It concludes that there is substantial under-achievement, in that SWE is failing to provide a range of experiences, opportunities and benefits to students, and to the other partners. The problem lies with the way in which SWE is managed.

The QAA study (2005) of foundation degrees found a number of examples that help make WBL effective; these include: defining and describing the rationale and arrangements for WBL; providing opportunities for employers and programme staff to meet; employing an administrator to organise WBL; providing written and face-to-face briefings for employers; and drawing up a three-way agreement of the respective responsibilities of the provider, employer and student. The importance of the pre-placement briefings for both students and employers is also underlined by Greenbank (2002), as is the importance of the mediating role of the 'academic-tutor' in relation to the students on placement and the placement providers. Thomas and Grimes (2003) emphasise the need to develop a 'reciprocal approach' by all actors in the relationship, which is

essential to achieving the goals desired by students, industry and education.

4.5.4 Realism and relevance of work-based learning activities

The QAA study (2005) refers to the 'realism of the activities' as an example of good practice that contributes to the achievement of WBL outcomes. This is borne out by the study of live projects where employers 'hosting' the live projects cited 'free consultancy, improved public relations, fresh approach to problem solving and realistic recommendations' (Thomas and Busby 2003, p 233). Students too were aware of the benefits and all those participating felt the skills they had developed would be of great value to future employers. One of the problems associated with WBL as perceived by students surveyed by York Consulting (2004) was the lack of, or limited, relevance of the WBL experienced to either the subject of their foundation degree or to their employment.

4.5.5 Academic staff development

One of benefits of working with employers and in particular 'live projects' is the need for tutors to work closely with the employer organisation (Thomas and Busby 2003). This close working relationship gives the tutor invaluable insights into the organisation, which helps provide 'pertinent industrial examples for lectures, as well as a basis for case-study development' (p 233), thus enhancing students' learning experiences and outcomes. This is underlined in the findings from the QAA study (2005) which identifies 'assisting with staff development' as one of the ways in which employers can effectively contribute to foundation degree programmes and benefit students (p 10).

4.5.6 Barriers to engaging employers

A number of studies highlighted barriers to engaging employers. Hillier and Rawnsley (2006) in their study noted that employers were not able or interested in being fully engaged in the programme, the main reasons being time and work pressures. Lack of interest was one of three barriers identified in another study (York Consulting 2004) along with a lack of understanding (of the foundation degree) and its potential benefits to the organisation, and the difficulties of the engaging organisations employing limited numbers of people. Another barrier can be the use of academic language. A study exploring in-company education found that the use of academic language in the delivery of the curriculum was perceived as negative and pejorative by the participants (Kinman and Kinman 2000). Findings from the QAA study of foundation degrees (2005) emphasise that documents for employers, while setting out clearly information about the programme, should avoid unnecessary educational terms.

4.5.7 Size of employer organisation

As noted above, size of employing organisation can be a barrier to employer engagement. The QAA's (2005) follow-up survey of foundation degrees found that co-operation between providers and SMEs, while often effective, could be time-consuming for the educational institution because of the time spent maintaining effective communication with a large number of employers. A further study of foundation degrees (York Consulting 2004) seems to confirm this point; it found 'evidence of good practice in engaging employers through employer networks, public sector bodies and stakeholder groups, rather than approaching individual employers' (p 44). Greenbank's study (1999) of micro-businesses suggests that small employer organisations can provide particular benefits for students on placements. He notes that placements in micro-businesses are useful for linking theory and practice, developing transferable skills, and providing experience for both self-employment and employment in small and large organisations.

4.6 Summary of results of synthesis

A subset of the research identified in the systematic map was chosen for the in-depth review – evaluative studies that presented findings on the impact of employer engagement on employers and students from the employer/student perspectives. Eight studies met the criteria. All covered some form of work-based learning (WBL) – supervised work experience, placement, live project, in-company education, a pilot graduate apprenticeship. The majority were institutional case studies (some involving very small numbers), although three were sector-wide studies (two of foundation degrees). All aimed to measure the expectations and experiences of students, employers or programme teams, or a combination of these.

Given that all of the studies in the in-depth review were short on detail, particularly regarding (i) the study design and sample and/or (ii) the data collection and analysis, we decided to code all with an overall Weight of Evidence 'medium'.

Our synthesis is based on a number of cross-cutting themes relating to student/employer perceptions of impact which characterise this set of studies; these have been identified as:

- Benefits of WBL to students include gaining new and improving existing skills such as personal (e.g. increased confidence), problem-solving and communicative skills; adapting existing knowledge and skills to the needs of new situations in the workplace; managing their own learning; and applying theory in practice.

- Benefits of WBL to employers were their recognition that students'/employees' skills had improved.

- Issues in the management of WBL concerned the actors involved – students, employers, institutions/academics. For students, difficulties arose in organising placements. For employers and institutions, for example, the need to create opportunities to meet and adequately brief all involved about the aims and responsibilities of placements was emphasised.

- Realism of WBL activities was highlighted as helping the achievement of WBL learning outcomes – for example, through 'live' projects.

- Academic staff development can arise from tutors' close working relationship with employer organisations resulting in valuable insights into the workings of organisations and thus enhancing students' learning experiences and outcomes.

- Barriers to engaging employers included lack of interest, lack of understanding, and lack of ability through time and work pressures on the part of employers, and the unnecessary use by institutions/academics of academic language and terminology.

- Size of employer organisation: co-operation between educational providers and Small and medium enterprises (SMEs) can be time consuming; there is some evidence to suggest that engaging employers through employer networks is more beneficial.

4.6.1 Details of the intervention

Five of the studies were institution-specific (i.e. took place in one institution). Of these, one focused on a foundation degree and explored students' and employers' experiences (Hillier and Rawnsley 2006). The others were of undergraduate programmes designed and delivered by a higher education institution with some form of WBL – work placements, supervised work experience, live projects, a pilot graduate apprenticeship. The exception was an undergraduate programme delivered by a university 'in house' to a group of senior managers of a company. The three remaining studies were sector-wide: two being programme specific – foundation degrees (York Consulting 2004, QAA 2005) – and the other programme- and occupational area–specific – undergraduate tourism programmes (Leslie and Richardson 1999).

4.6.2 Outcomes measured

All the studies aimed to measure (among other things) the expectations and experiences of 'key stakeholders' of the various forms of WBL identified in Section 4.5. The studies differed in terms of whose expectations and experiences were being measured – be it students, employers, or programme teams, or a combination of these.

4.6.3 Study design

All the studies were categorised as case and/or views studies. By 'views' studies we mean that the researchers were trying to understand phenomena from the point of the 'worldview' of a particular, group, culture or society (EPPI-Centre 2006). Many of the case studies were small-scale. The studies used a range of methods to collect data – focus groups, one-to-one interviews, self-completion questionnaires, document analysis, and secondary analysis of publicly available statistics.

4.6.4 Occupational areas

Our inclusion criteria focused on employers not traditionally engaged in course development before, which excluded the main professional occupations. Thus, of the interventions included in the in-depth review studies, the majority fell into two broad categories: business and management, and hospitality and tourism. Two studies, being sector-wide, were programme specific – foundation degrees

CHAPTER FIVE

Implications

The chapter looks at the strengths and limitations of the systematic map and the in-depth review, and considers the implications for policy, practice and research.

5.1 Strengths and limitations of this systematic review

5.1.1 Strengths of this systematic review

By definition, systematic reviews are accountable, replicable, updateable and sustainable. The systematic review process ensures that hidden bias and error is reduced at all stages of the review. The main strengths of this review are that it has been rigorous and transparent. Our initial electronic searches identified 3,944 potential studies; these were distilled down (and added to) until we were left with 28 studies in our systematic map. These were further reduced to eight for our in-depth review. Throughout all stages of the review, quality assessment processes were applied internally within and externally to the review group, and advice and support was provided by staff of the EPPI-Centre.

We discuss a number of limitations below regarding the map and the in-depth review. Nevertheless, within the parameters that we set ourselves, we feel it is likely that all of the studies of relevance to this review question have been found and that the review provides a degree of clarity about the research evidence and its implications for policy, practice and further research.

What we are not able say confidently from the in-depth review is that students and employers have benefited (or not) as a result of employer engagement (in the context of academic staff, students' and employers' perceptions) – i.e. we are not able to establish a causal impact or relationship. For example, the skills gained or enhanced by students' engagement with curricula informed by employer input might be the result of other factors instead of or as well as employer input. Employer engagement may well be an important factor in course development, but we are unable to say with conviction that this is the case, especially given that none of studies involved control groups. However, what we can say, because of the strengths of this review as outlined above, is that there are benefits (and hindrances) as perceived by some academic staff, some students and some employers involved in some courses.

5.1.2 Limitations of the map

Timescale and resources were a limitation in this review. For this reason it was agreed that a 'limited search scoping review (map and synthesis)' would be undertaken. This type of review involves a focused question and a limit to the number of bibliographic databases searched. We limited our search to two, which only generated a minority of the studies found; however, there was extensive 'handsearching'. Nevertheless, we sense that because of the limited nature of the search strategy, relevant studies might have been missed.

If time and resources had not been a constraint, a number of actions could have been taken to track down additional studies. For example, a careful look at the references of each of the articles found (both included and excluded) might have led us to research that was not picked up by the searches. Many reports of studies appeared to be descriptive (and hence were ultimately excluded from our review), although some may have stemmed from empirical research that was unpublished; contacting the authors may have led us to grey literature of an empirical nature. There were studies where the level of engagement (i.e. HE and/or FE at level 3 or above) and/or the subject/occupational area were unclear, and these were discarded; again, contacting the authors might have led to their inclusion. Additionally, searches of a wider range of websites could have uncovered more studies.

It proved difficult to find studies that (i) explored the input and role of employers in course development (i.e. whether it was through design and development or through the provision of work-based learning opportunities and the like), and (ii) focused on impact on students and/or employers (i.e. that were evaluative and discussed 'what works' as opposed to studies that were descriptive and offered little analytical and evaluative content).

It was disappointing that the review did not find more large-scale studies and studies that tracked students/graduates in(to) the labour market to explore how the skills and knowledge they had acquired as a result of engaging with curricula that had been developed/delivered with employers (e.g. work-based learning elements) had made an impact – on students/graduates themselves and on employers. However, we are aware that any attempt to isolate this or any 'single' aspect of a student's learning experience and measure impact is inherently difficult.

In order to make the review manageable, it was agreed at the outset that we would exclude employers and professions that have been traditionally engaged in course development. We think it worth noting that, in doing so, it seems likely that studies will have been omitted that could have shed further light on the impact on students and employers of employer engagement in course development. Of course, it should also be noted that if we had included studies of these employers/professions, this would have been a very different systematic review.

5.1.3 Limitations of the in-depth review

This in-depth review is, as far as we know, the only systematic review of its kind. It draws attention to the limitations of the primary research in this field and points the way to further evaluations.

As we note above, we believe it is likely that most of the studies have been found within the parameters of this review. However, there are a number of factors that we also believe might limit the usefulness of this in-depth review and are worth noting as follows:

i. As mentioned in 5.1.2, because it was a 'limited' review, we sense that some relevant studies might have been missed.

ii. The team believes that, having a better idea of the range of material that reports research into the perceptions of impact of employer engagement, further studies for the in-depth review might be found if the search was to be re-run.

iii. Having extended our review to the FE sector to see what lessons might be learned from that sector's experience, some studies were included in the map, but none appears in the in-depth review (except for a programme collaboratively delivered by a university and a FE college – Hillier and Rawnsley 2006).

iv. Our in-depth review includes only one study (Kinman and Kinman 2000) that deals with workforce development as opposed to 'initial' HE and work-based learning.

v. By focusing on impact from the student/employer perspectives, we are aware that a number of studies have been excluded, particularly those that explore impact from the providing institution's perspective (e.g. Foskett 2005, McCoshan et al. 2005).

vi, The final issue was the lack of empirical studies focusing on impact that were of apparent good methodological quality. This is not to say that the studies were not methodologically sound, but the lack of detail reported regarding the study design and sample and/or the data collection and analysis meant that we could not be confident about their quality. For example, a number of studies were small case studies and did not report sample size calculations; others reported holding interviews with students/employers, but no details were provided and in some instances there was no discussion of the results.

5.2 Implications of the in-depth review

5.2.1 Implications for policy and practice

Barriers to engagement

Our synthesis of the studies included in the in-depth review has shown that while there are benefits (e.g. of work-based learning) to both employers and students, there are barriers to engaging employers in course development.

One barrier is size of employer organisation. Connor (2005) notes that size of employer is important; large organisations are traditionally more likely to engage with higher education than smaller ones, especially micro-businesses, because they have a greater capacity and resource to research the differences in provision and quality of higher education institutions for WBL purposes.

In their study for the Higher Education Funding Council of England (HEFCE), Brennan and Little (2006) suggest that the Funding Council's strategy for workplace learning and employer engagement should:

i. look to more innovative forms of workplace learning to reach 'hard-to-engage' employers (i.e. small and medium-sized enterprises);

ii. should have 'more of a role in stimulating and supporting the growth of new arrangements for workplace learning in areas (employment sectors,

– and, moreover, institutions' corporate areas (York Consulting 2004, QAA 2005) perhaps little support and understanding)' (p 77).

Connor (2005) suggests:

iii. that institutions need to make internal changes to engage smaller employers – for example, by making their accreditation systems more flexible;

iv. that awareness among small employers needs to be raised about how institutions can support their workforce training/development needs.

Various government agencies (e.g. HEFCE, the Learning and Skills Council, the Sector Skills Development Agency) are now promoting initiatives to encourage demand-led employer engagement, such as Train to Gain and Higher Level Skills Pathfinders. Moreover, there is a much wider literature on employer engagement – broadly conceived – and demand for continuing training and workforce development for existing employees.

Management of WBL

Our in-depth review has shown that the management of WBL appears to be an issue (e.g. in terms of the design of WBL programmes, liaison between the educational institution and the employer, and so on). However, there are studies that have reported on best practice in managing and supporting WBL, e.g. Butters et al. (1995) and Brennan and Little (1996) – two conceptual studies, which were excluded from our inclusion criteria and hence our review. Butters et al. in their guidelines for good practice show that:

i. different subject area specialisms determine different WBL patterns and processes – academics and employers 'tend to refer to discipline-based values and norms in their search for best practice models for supporting WBL' (p 7);

ii. workplace learning of specialist knowledge and competence is optimised by systematic learner support;

iii. learning from workplace experience is influenced by organisational climate – 'the internal culture of the organisation in which students undertake workplace learning' (p 8);

iv. management roles contribute significantly to the successful conduct of subject-focused workplace learning – 'good management makes a difference to the experiences and achievements of the WBL student'

The review of literature undertaken by Brennan and Little (1996) covers similar terrain. They state that 'learners in the workplace will need emotional support, practical support and political support if they are to capitalise on their workplace learning in terms of their overall programme leading to recognition in higher education terms' (p 97).

Why then does the management and support of WBL continue to be an area of concern? It may be that given the lack of good quality research, as evidenced by our review, there is not the research-based practice and thus when 'best practice' is promoted, it is not trusted. It may also be that where best practice is underpinned by research-based practice, it is not being shared or, more precisely, is not being shared outside the confines of the disciplinary culture and occupational area concerned (i.e. there might be a perpetuation of the notion that something learnt in one disciplinary area is not applicable to another because of the nature of the discipline). As we note above, there may be lessons to be learned from those employers and professions that have been traditionally engaged in course development, and which could be shared across disciplinary cultures and occupational areas.

5.2.2 Implications for research

A general conclusion from the systematic review and in-depth study is that there appears to be a need for more rigorous evaluative, analytical and longitudinal studies to shed further light on the impact of employer engagement in course development – and in the disciplinary areas and occupational sectors that were the focus of this review.

The diversity of the scope of the studies identified by this review make it difficult to propose 'hard' recommendations for further research. However, given this diversity, it does suggest that there is a need for a more co-ordinated approach to future research in this area, and below are some suggestions for research that may form the basis of such an approach and would go some way towards filling the gaps identified by this systematic review. It should be noted, however, that elements of this suggested research might raise methodological issues that could prove difficult to address.

Suggested research areas and topics

i. Employer engagement can mean different things to different people and in different contexts. For example, our review has shown that there is a difference between initial HE and work-based learning, and workforce and continuing professional development. This distinction, however, is perhaps too simplistic. Research might therefore explore what is meant by 'employer engagement', 'who' does it involve? (e.g. the individual employer, the sector, the professional organisation), and for what purposes? (e.g. teaching and learning, business development, consultancies)? What models of engagement are being used by (different types of) HE institutions (and FE colleges)? What input and roles do employers have? What works and why?

ii. Our review identified only one study that was concerned with workforce development. It is clear, therefore, that more research could be undertaken in this area, focusing on its efficacy in

terms of the employer and the employee.

iii Related to the above, research might explore how employer demand and need are identified, articulated, interpreted and used by HE institutions. What works well in developing, shaping and delivering the HE curriculum?

iv. Most of the studies reported in the review are one-off evaluations of interventions, thus more studies of a longitudinal nature might be undertaken to gauge the longer-term outcomes of employer engagement on employers, students/ employees and course designers.

v. Research might also focus on the use of student control groups to establish causal impact or relationships between students' learning outcomes and employer engagement, for example by focusing on those students who take part in work-based learning activities against those who choose not to or are unable to. However, as mentioned above, research of this nature might pose difficult methodological issues (i.e. identifying a programme or programmes where students have the choice, identifying measures of impact, and isolating 'single' aspects of students' learning experiences in relation to outcomes).

vi. It could prove useful to undertake another systematic review using the same (or similar) review question but from the perspective of employers and professions traditionally engaged in course development. Based on the outcomes of that review, research might 'test' whether there are lessons to be learned that could be applied to the sectors and occupational areas that were the focus of our review.

We should also note that we are aware of research that has reported during the course of this review and is therefore not included. In particular, there are a number of studies of foundation degrees that have reported (e.g. Matthews et al. 2007, Raddon and Quinn 2007). There is also a range of ongoing research projects commissioned by HE policy bodies such as the Council for Industry and Higher Education ('Employer demand, engagement with higher education and how it influences supply'), Foundation Degree Forward (e.g. 'The impact of foundation degrees on students and the workplace'), the Higher Education Academy ('An impact study of work-based learning qualifications') and the Higher Education Funding Council for England ('The quality assurance needs of HE learning tailored for employers and employees').

Outcomes from these studies will further shape the suggested areas and topics for research mentioned above and may also provide answers to some of them. Thus, they will be of interest to those conducting future systematic reviews in this area and to policy-makers wishing to develop a programme of research.

CHAPTER SIX

References

6.1 Studies included in map and synthesis

* Denotes a publication included in the in-depth review

Allen S, Williams A (2005) Measuring engagement between industry and higher education in the built engagement sector. *Industry and Higher Education* December 2005: 457–468.

Centre for Developing and Evaluating Lifelong Learning (2000) *Graduate apprenticeship pilot projects. Evaluation report - second stage*. Nottingham: University of Nottingham, School of Education.

Centre for Developing and Evaluating Lifelong Learning (2001) *Graduate apprenticeship development. Second stage projects. Evaluation report*. Nottingham: University of Nottingham, School of Education.

Connor H (2005) *Workforce development and higher education*. London: Council for Industry and Higher Education.

Cox S, King D (2006) Skill sets: An approach to embed employability in course design, *Education + Training* 48: 262–274.

Education and Training Inspectorate, the Quality Assurance Agency for Higher Education (2003) *Report of a survey. The provision of the pilot programme of foundation degrees in seven colleges of further and higher education*. Gloucester: Quality Assurance Agency for Higher Education.

Foskett R (2005) Collaborative partnership in the higher education curriculum: a cross-sector study of foundation degree development. *Research in Post-Compulsory Education* 10: 351–371.

Foskett R (2005) Collaborative partnership between HE and employers: a study of workforce development. *Journal of Further and Higher Education* 29: 251–264.

*Greenbank P (2002) Undergraduate work experience: an alternative approach using micro businesses. *Education + Training* 44: 261–270.

*Hillier Y, Rawnsley T (2006) Education, education, education or employers, education and equity: managing employer and employee expectations of foundation degrees. Paper for *Higher Education Close Up Conference*, University of Lancaster, 24–26 July 2006.

*Kinman R, Kinman G (2000) "What's that got to do with making motor cars?" The influence of corporate culture on in-company degree programmes. *Journal of Education and Work* 13: 5–24.

Ladkin A, Peacock N (2002) Exploring relationships between higher education and industry: a case study of a university and the local tourism industry. *Industry and Higher Education* December 2002: 393–401.

*Leslie D, Richardson A (1999) Work placement in UK undergraduate programmes. Student expectations and experiences. *Industry and Higher Education* April 1999: 142–150.

Mason G, Williams G, Crammer S, Guile D (2003) *How much does higher education enhance the employability of graduates*. Bristol: Higher Education Funding Council for England.

McCoshan A, Costello M, Souto Otero M (2005) *Work-based learning providers' views on their links with employers. A final report to the Department for Education and Skills*. ECOTEC Research and Consulting Limited

Ryan P, Gospel H, Lewis P (2006) Educational and contractual attributes of the apprenticeship

programmes of large employers in Britain. *Journal of Vocational Education and Training* 58: 359–383.

Sheehan C (2006) Foundation Degree assessment models. Meeting the needs of the new generation of higher level students on hospitality management foundation degrees. In: Beaney P (ed.) *Researching Foundation Degrees. Linking Research and Practice*. London and Lichfield: fdf publications, pp 96–122.

Step Ahead Research Ltd, RCU Ltd (2004) *One North-East. Foundation degrees: supply and demand in North-East*. England Newcastle-Upon-Tyne: One North-East, 70p

The KSA Partnership (2006) *Workplace learning in the North East*. Bristol: Higher Education Funding Council for England.

The Quality Assurance Agency for Higher Education (2003) *Overview report on foundation degree reviews*. Gloucester: QAA.

The Quality Assurance Agency for Higher Education (2005) *Learning from reviews of foundation degrees in England carried out in 2004-2005*. Gloucester: QAA.

The Quality Assurance Agency for Higher Education (2005) *Report of a survey of Foundation Degree converted from existing Higher National Diplomas since 2001*. Gloucester: QAA.

*The Quality Assurance Agency for Higher Education (2005) *Report of a survey to follow up Foundation Degree reviews carried out in 2002-2003*. Gloucester: QAA.

The Quality Assurance Agency for Higher Education (2006) *Outcomes from institutional audit. Institutions' work with employers and professional, statutory and regulatory bodies. QAA 131 10/06*. Gloucester: QAA.

The Quality Assurance Agency for Higher Education (2006) *Outcomes from institutional audit. Work-based and placement learning, and employability. QAA 104 03/06*. Gloucester: QAA.

*Thomas S, Busby S (2003) Do industry collaborative projects enhance students' learning? *Education + Training* 45: 226–235.

*Thomas S, Grimes D (2003) Evaluating the integration of key skills and NVQs into an undergraduate degree programme: a case study from the graduate apprenticeship initiative. *Education + Training* 45: 383–391.

*York Consulting (2004) *Evaluation of Foundation Degrees: final report*. Nottingham: Department for Education and Skills.

6.2 Other references used in the text of the Technical Report

Brennan J, Little B (2006) *Towards a strategy for workplace learning*. Bristol: Higher Education Funding Council for England.

Brennan J (2004) *Things we know and don't know about graduate employment*. Paper presented to the Employability Advisory Group, Centre for Higher Education Research and Information, December 2004.

Brennan J, Kogan M, Teichler U (eds) (1996) *Higher education and work*. London: Jessica Kingsley.

Brennan J, Little B (1996) *A review of work based learning in higher education*. London: Department for Education and Employment and Quality Support Centre, the Open University (Centre for Higher Education Research and Information).

Brown P, Hesketh A (2004) *The mismanagement of talent. Employability and jobs in the knowledge economy*. Oxford: Oxford University Press.

Burniston S, Rodger J, Brass J (1999) *Enterprise in higher education - changing the mindset. Research Brief No. 117*. Nottingham: Department for Education and Employment.

Butters S, Little B, Nixon N (1995) *Developing students' subject area knowledge and skills in the workplace*. London: Quality Support Centre, Open University.

Connor H (2005) *Workforce development and higher education*. London: Council for Industry and Higher Education.

Department for Education and Skills (2007) *Higher education funding 2007-08. Annual grant letter*. http://www.hefce.ac.uk/news/hefce/2007/grant/letter.htm

Department for Education and Skills (2006a) *Further education: raising skills, improving life chances*. Norwich: Her Majesty's Stationery Office.

Department for Education and Skills (2006b) *Further education and training bill*. Norwich: Her Majesty's Stationery Office.

Department for Education and Skills (2005a) *14-19 Education and skills*. Nottingham: Department for Education and Skills.

Department for Education and Skills (2005b) *Skills: Getting on in business, getting on at work Part 1*. Norwich: Her Majesty's Stationery Office.

Department for Education and Skills (2003) *21st century skills: realising our potential*. Nottingham: Department for Education and Skills.

EPPI-Centre (2006) *EPPI-Centre data extraction and coding tool for education studies v2.0*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Gleeson D, Keep E (2004) Voice without accountability: the changing relationship between employers, the state and education in England. *Oxford Review of Education* 30: 37–63.

Harvey L, Geall V, Moon S (1998) *Work experience: expanding opportunities for undergraduates*. Birmingham: Centre for Research into Quality, University of Central England in Birmingham.

Harvey L, Locke W, Morey A (2002) *Enhancing employability, recognising diversity*. London: Universities UK and Careers Services Unit.

Higher Education Funding Council for England (2006) *Engaging employers with higher education. HEFCE strategy to support links between higher education and employers on skills and lifelong learning*. Bristol: HEFCE. www.hefce.ac.uk/News/HEFCE/2006/employer.htm

Leitch Review of Skills (2006) *Prosperity for all in the global economy – world class skills. Final report*. Norwich: Her Majesty's Stationery Office.

University of Manchester (2004) *Work experience recruitment survey*. Manchester: UMIST Careers Service.

Mason G, Williams G, Cranmer S, Guile D (2003) *How much does higher education enhance the employability of graduates?* Bristol: Higher Education Funding Council for England.

Matthews H, Maynard M, Kraftl P (2007) *Sustainable foundation degrees: a case study of Northamptonshire*. Bristol: Higher Education Funding Council for England.

Raddon A, Quinn M (2007) *Demand for foundation degrees and engaging employers in the East Midlands*. Bristol: Higher Education Funding Council for England.

Social Science Research Unit (2006) *Application pack. DfES-funded systematic reviews in partnership with the EPPI-Centre 2006-07*. London: Social Science Research Unit, Institute of Education, University of London.

Appendix 1.1: Authorship of this report

This work is a report of a systematic review conducted working with support staff.

The authors of this report are:

Anne Scesa (Centre for Higher Education Research and Information (CHERI) of the Open University)
Ruth Williams (Centre for Higher Education Research and Information (CHERI) of the Open University)

With support from Brenda Little, William Locke and Winnie Tang of the Centre for Higher Education Research and Information (CHERI) of the Open University.

For further information about this review, please contact:

Ruth Williams
Senior Policy Analyst
Centre for Higher Education Research and Information (CHERI) of the Open University

tel: 020 7447 2552
email: r.k.williams@open.ac.uk

For further information about the work of the EPPI-Centre, please contact:

EPPI-Centre
Social Science Research Unit
Institute of Education, University of London
18 Woburn Square

Tel: +44 (0)20 7612 6397
Fax: +44 (0)20 7612 6800
E-mail: EPPIAdmin@ioe.ac.uk

Review group

Brenda Little (Centre for Higher Education Research and Information (CHERI), The Open University
William Locke (Centre for Higher Education Research and Information (CHERI), The Open University)
Anne SCESA (Centre for Higher Education Research and Information (CHERI), The Open University)
Winnie Tang (Centre for Higher Education Research and Information (CHERI), The Open University)
Ruth Williams (Centre for Higher Education Research and Information (CHERI), The Open University)

Advisory group membership

For this review:

Conflict of interest

There were no conflicts of interest for any member of the review group.

Acknowledgements

The work described in this report was undertaken by the Centre for Higher Education Research and Information (CHERI) of the Open University, which received funding from the former Department for Education and Skills (DfES). The views expressed in the report are those of the authors and not necessarily those of the Department for Children Schools and Families (DCSF), or the Department for Innovation, Universities and Skills (DIUS), which have replaced the DfES.

The review group is grateful to the members of the EPPI-Centre, which is part of the Social Science Research Unit at the Institute of Education, University of London, and particularly to Kelly Dickson and Mark Newman, for their advice and support during the course of the review. We are also grateful to members of the advisory group for their helpful suggestions.

The review group acknowledges the financial support of the former DfES and the professional support provided by its officers throughout the review process.

Appendix 2.1: Inclusion and exclusion criteria

Inclusion criteria	*Exclusion criteria*
1. Must focus on 'new' employers not traditionally engaged in course development before	*Exclusion on scope* Not one of the main professional occupations i.e. those that prescribe (to a greater or lesser extent) the curricula of undergraduate courses leading to a professional qualification, membership or licence to practise and recognised by the relevant Professional, Statutory and Regulatory Body (PSRB). Thus, the main occupations excluded from this review are: accountancy; dentistry; engineering; law; medicine; nursing and midwifery; teaching; and veterinary science (except for foundation degrees where all occupations will be included)
2. Must cover HE (undergraduate qualifications) and/or FE (level 3 qualifications and above) - at least for the map of evidence	Not HE and/nor FE (level 3 and above) Not covering engagement in course development neither of individual employers and/nor wider bodies
3. Must cover engagement in course development of individual employers and/or wider bodies (such as sector skills councils)	Is not research on non-UK countries
4. Must cover research on the UK	*Exclusion by study type*
5. Must be empirical research	Description Methodology Editorial, commentary, book review Policy document Resource, textbook Bibliography conceptual studies (i.e. texts which offer ways of conceptualising developments/initiatives), academic critiques (texts which critique developments/initiatives)
6. Must cover research placed in the public domain between 1987 and present	*Exclusion on publication status* Research placed in the public domain before 1987

Appendix 2.2: Search strategy for electronic databases

Search log

Database searched	Date and person searching	Time and period of search	No. of hits	Downloaded file as	Filter used
BEI	1.11.06 Anna Scesa	1987 to 2006	165	BEI search results 1.11.06. txt	Dialogue Datastar
ERIC	14.11.06 Anna Scesa Kelly Dickson	1987 to 2006	3,809	ERIC search results zip	CSA
BEI and ERIC	14.11.06 Anna Scesa	Unlimited	102	BEI and ERIC authors search. rtf	Dialogue Datastar

Search strings

DATASTAR BREI: BREI/BRITISH EDUCATION INDEX '75- 01.11.2006

BREI	1	BUSINESS.DE.	RESULT	1467
BREI	2	BUSINESS	RESULT	2143
BREI	3	COMMERCE	RESULT	59
BREI	4	(COOPERATIVE ADJ PROGRAMMES).DE.	RESULT	350
BREI	5	COOPERATIVE ADJ PROGRAMMES	RESULT	351
BREI	6	(EDUCATIONAL ADJ COOPERATION).DE.	RESULT	1165
BREI	8	EDUCATIONAL ADJ COOPERATION	RESULT	1165
BREI	9	EMPLOYER	RESULT	565
BREI	10	(EMPLOYER ADJ ATTITUDES).DE.	RESULT	239
BREI	11	EMPLOYER ADJ ATTITUDES	RESULT	242
BREI	12	EMPLOYER ADJ ENGAGEMENT	RESULT	3
BREI	13	EMPLOYER ADJ INVOLVEMENT	RESULT	4
BREI	14	EMPLOYER ADJ LINKS	RESULT	5
BREI	15	(EMPLOYER ADJ ROLE).DE.	RESULT	20
BREI	16	EMPLOYER ADJ ROLE	RESULT	20
BREI	17	INDUSTRY.DE.	RESULT	2269
BREI	18	INDUSTRY.DE. AND (FURTHER ADJ EDUCATION ADJ RELATIONSHIP).DE	RESULT	78

BREI	19	INDUSTRY AND FURTHER ADJ EDUCATION ADJ RELATIONSHIP	RESULT	78
BREI	20	INDUSTRY.DE. AND (HIGHER ADJ EDUCATION ADJ RELATIONSHIP).DE.	RESULT	1084
BREI	21	INDUSTRY AND HIGHER ADJ EDUCATION ADJ RELATIONSHIP	RESULT	1084
BREI	22	PARTNERSHIP	RESULT	1140
BREI	23	SANDWICH ADJ PLACEMENTS	RESULT	6
BREI	24	(SANDWICH ADJ COURSES).DE.	RESULT	47
BREI	25	(WORK ADJ BASED ADJ LEARNING).DE.	RESULT	338
BREI	26	WORK ADJ BASED ADJ LEARNING	RESULT	379
BREI	27	(WORK ADJ EXPERIENCE).DE.	RESULT	216
BREI	28	WORK ADJ EXPERIENCE	RESULT	267
BREI	29	WORK ADJ PLACE ADJ LEARNINg	RESULT	0
BREI	30	WORKPLACE ADJ LEARNING	RESULT	63
BREI	31	WORK ADJ PLACEMENT	RESULT	24
BREI	32	WORK ADJ RELATED ADJ LEARNING	RESULT	22
BREI	33	(COURSE ADJ DESIGN).DE.	RESULT	0
BREI	34	COURSE ADJ DESIGN	RESULT	60
BREI	36	COURSE ADJ PLANNING	RESULT	4
BREI	37	(COURSE ADJ DEVELOPMENT).DE.	RESULT	0
BREI	38	(CURRICULUM ADJ DESIGN).DE.	RESULT	447
BREI	39	CURRICULUM ADJ DESIGN	RESULT	485
BREI	40	(CURRICULUM ADJ DEVELOPMENT).DE.	RESULT	3652
BREI	41	CURRICULUM ADJ DEVELOPMENT	RESULT	3776
BREI	43	COURSE ADJ DEVELOPMENT	RESULT	56
BREI	44	CURRICULUM ADJ PLANNING	RESULT	60
BREI	46	(PROGRAMME ADJ DESIGN).DE.	RESULT	204
BREI	47	PROGRAMME ADJ DESIGN	RESULT	216
BREI	48	(PROGRAMME ADJ DEVELOPMENT).DE.	RESULT	383
BREI	49	PROGRAMME ADJ DEVELOPMENT	RESULT	404
BREI	51	PROGRAMME ADJ PLANNING	RESULT	13
BREI	52	ACADEM$	RESULT	8252
BREI	53	(ADVANCED ADJ FURTHER ADJ EDUCATION).DE.	RESULT	108
BREI	54	ADVANCED ADJ FURTHER ADJ EDUCATIOn	RESULT	108
BREI	55	CENTRE ADJ OF ADJ VOCATIONAL ADJ EXCELLENCE	RESULT	2
BREI	56	(COLLEGES ADJ OF ADJ FURTHER ADJ EDUCATION).DE.	RESULT	835
BREI	57	COLLEGES ADJ OF ADJ FURTHER ADJ EDUCATION	RESULT	846
BREI	58	(COLLEGES ADJ OF ADJ HIGHER ADJ EDUCATION).DE.	RESULT	176
BREI	59	COLLEGES ADJ OF ADJ HIGHER ADJ EDUCATION	RESULT	194
BREI	60	(FURTHER ADJ EDUCATION).DE.	RESULT	4182
BREI	61	FURTHER ADJ EDUCATION	RESULT	4212
BREI	62	(FURTHER ADJ EDUCATION ADJ COLLEGES).DE.	RESULT	6
BREI	63	FURTHER ADJ EDUCATION ADJ COLLEGES	RESULT	6
BREI	64	(HIGHER ADJ EDUCATION).DE	RESULT	27249
BREI	65	HIGHER ADJ EDUCATION	RESULT	29727
BREI	66	(HIGHER ADJ EDUCATION ADJ COLLEGES).DE.	RESULT	0
BREI	67	HIGHER ADJ EDUCATION ADJ COLLEGES	RESULT	13
BREI	68	HIGHER ADJ EDUCATION ADJ INSTITUTIONS	RESULT	219
BREI	69	POLYTECHNICS.DE	RESULT	383
BREI	70	POLYTECHNICS	RESULT	696
BREI	71	SKILL$ ADJ ACADEM$	RESULT	12
BREI	72	(TERTIARY ADJ COLLEGES).DE.	RESULT	52
BREI	73	TERTIARY ADJ EDUCATION	RESULT	155
BREI	74	TERTIARY ADJ COLLEGES	RESULT	62

BREI	75	(TERTIARY ADJ EDUCATION).DE.	RESULT	6
BREI	76	UNIVERSITIES.DE.	RESULT	7602
BREI	77	UNIVERSIT$	RESULT	17826
BREI	78	UNIVERSITIES.DE. AND COLLEGES.DE.	RESULT	678
BREI	79	UNIVERSITIES AND COLLEGES	RESULT	1862
BREI	80	(VOCATIONAL ADJ EDUCATION).DE.	RESULT	2047
BREI	81	VOCATIONAL ADJ EDUCATION	RESULT	2439
BREI	82	(1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 8 OR 9 OR 10 OR 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 30 OR 31 OR 32) AND (33 OR 34 OR 36 OR 38 OR 39 OR 40 OR 41 OR 43 OR 44 OR 46 OR 47 OR 48 OR 49 OR 51) AND (52 OR 53 OR 54 OR 55 OR 56 OR 57 OR 58 OR 59 OR 60 OR 61 OR 62 OR 63 OR 64 OR 65 OR 67 OR 68 OR 69 OR 70 ADJ OT ADJ 71 OR 72 OR 73 OR 74 OR 75 OR 76 OR 77 OR 78 OR 79 OR 80 OR 81)	RESULT	181
BREI	83	..LIMIT 82 YEAR > 1987	RESULT	165

DATASTAR ERIC DATABASE ***14.11.2006***

Tue Nov 14 16:14:12 GMT 2006

CSA

Multiple Databases
Query: ((business or commerce or (cooperative programmes)) or ((educational cooperational) or employer or (employer attitudes)) or ((employer engagement) or (employer involvement) or (employer links)) or ((employer role) or industry or (education and work relationship)) or (partnership or (partnership in education) or (sandwich placements)) or ((student placements) or internship or (work-based learning)) or ((work experience) or (workplace learning) or (work placements)) or (work related learning)) and (((course design) or (course development) or (course planning)) or ((curriculum design) or (curriculum development) or (curriculum planning)) or ((program design) or (program development) or (program planning))) and ((academic or college or (further education)) or ((post secondary) or (higher education) or (higher education colleges)) or ((higher education institutions) or polytechnics or (tertiary education)) or ((tertiary colleges) or universit* or (universities and colleges)) or ((vocational education) or (skill* academ*)))

ERIC and BREI Author search

1 *British Education Index - 1975 to date*

(LYONS-FRANK OR PORTWOOD-DEREK OR GARNETT-JONATHAN OR COSTLEY-CAROL OR GALLACHER-JIM OR REEVE-FIONA OR ALLEN-STEPHEN OR WILLIAMS-ALED OR FOSKETT-ROSALIND OR HUGHES-MARIA).AU.
unrestricted 62

2 *ERIC - 1966 to date*

(LYONS-FRANK OR PORTWOOD-DEREK OR GARNETT-JONATHAN OR COSTLEY-CAROL OR GALLACHER-JIM OR REEVE-FIONA OR ALLEN-STEPHEN OR WILLIAMS-ALED OR FOSKETT-ROSALIND OR HUGHES-MARIA).AU.
unrestricted 40

3 *British Education Index - 1975 to date ERIC - 1966 to date*

combined sets 1, 2 unrestricted 102

Education and Training (ISSN 0040-0912)

Higher Education (ISSN 0018-1560)

Appendix 2.3: Journals handsearched

Higher Education Quarterly (ISSN 0951 5224)
Higher Education Research and Development (ISSN 1469-8366)
Industry and Higher Education (ISSN 0950-4222)
Journal of Education and Work (ISSN1363 9080)
Journal of Further and Higher Education (ISSN 0309-877X)
Journal of Vocational Education and Training (ISSN 1747-5090)
Research Papers in Education (ISSN 0267-1522)
Studies in Higher Education (ISSN 1470-174X)

Council for Industry and Higher Education
Department for Education and Skills
Enhancing Student Employability Co-ordination Team (ESECT)
Foundation Degree Forward
Higher Education Funding Council for England
Learning and Skills Development Agency, and its successor organisation (since April 2006) the Learning and Skills Network
Quality Assurance Agency for Higher Education
University Vocational Awards Council

Appendix 2.4: EPPI-Centre data extraction and coding tool and review-specific keywords

EPPI-Centre data extraction and coding tool for education studies v2.0

Use of these guidelines should be cited as: EPPI-Centre (2007) Review

Guidelines for Extracting Data and Quality Assessing Primary Studies in Educational Research. Version 2.0. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Section A: Administrative details

A.1 Name of the reviewer
A.1.1 Details

A.2 Date of the review
A.2.1 Details

A.3 Please enter the details of each paper which reports on this item/study and which is used to complete this data extraction.
(1): A paper can be a journal article, a book, or chapter in a book, or an unpublished report.

A.3.1 Paper (1)

Fill in a separate entry for further papers as required.

A.3.2 Unique Identifier:

A.3.3 Authors:

A.3.4 Title:

A.3.5 Paper (2)

A.3.6 Unique Identifier:

A.3.7 Authors:

A.3.8 Title:

A.4 Main paper. Please classify one of the above papers as the 'main' report of the study and enter its unique identifier here.
NB(1): When only one paper reports on the study, this will be the 'main' report.

NB(2): In some cases the 'main' paper will be the one which provides the fullest or the latest report of the study. In other cases the decision about which is the 'main' report will have to be made on an

arbitrary basis.A.4.1 Unique Identifier:

A.5 Please enter the details of each paper which reports on this study but is NOT being used to complete this data extraction.

NB A paper can be a journal article, a book, or chapter in a book, or an unpublished report.

A.5.1 Paper (1)

Fill in a separate entry for further papers as required.

A.5.2 Unique Identifier:

A.5.3 Authors:

A.5.4 Title:

A.5.5 Paper (2)

A.5.6 Unique Identifier:

A.5.7 Authors:

A.5.8 Title:

A.6 If the study has a broad focus and this data extraction focuses on just one component of the study, please specify this here.

A.6.1 Not applicable (whole study is focus of data extraction)

A.6.2 Specific focus of this data extraction (please specify)

A.7 Identification of report (or reports)

Please use AS MANY KEYWORDS AS APPLY.A.7.1 Citation

Please use this keyword if the report was identified from the bibliographic list of another report.

A.7.2 Contact

Please use this keyword if the report was found through a personal/professional contact.

A.7.3 Handsearch

Please use this keyword if the report was found through handsearching a journal.

A.7.4 Unknown

Please use this keyword if it is unknown how the report was found.

A.7.5 Electronic database
Please use this keyword if the report was found through searching on an electronic bibliographic database.

In addition, if the report was found on an electronic database please use ONE OR MORE of the following keywords to indicate which database it was found on:

aidsline
For AIDSLINE

appsocscience
For Applied Social and Abstracts

artscitation
For the Arts and Humanities Citation Index

aei
For the Australian Education Index

bei
For the British Education Index

bibliomap
For the EPPI-Centre's specialist register of research

cabhealth
For CABhealth

cei
For the Canadian Education Index

ceruk
For CERUK

cinahl
For the CINAHL

cochranelib
For the Cochrane Library

dissabs
For Dissertation Abstracts

dislearn
For the Distance Learning Database

eduabs
For Education Abstracts

educationline
For Education-line

embase
For EMBASE

eric
For ERIC

healthplan
For Health Planning

healthpromis
For HealthPromis

intbibsocsci
For the International Bibliography of the Social Sciences

langbehrabs
For Linguistic and Language Behaviour Abstracts

medline
For MEDLINE

psycinfo
For PsycINFO

regard
For REGARD

sigle
For SIGLE

socscicitation
For the Social Science Citation Index

socservabs
For the Social Services Abstracts

socioabs
For Sociological Abstracts

spectr
For the Social, Psychological, Educational & Criminological Trials Register

A.8 Status
Please use ONE keyword only

A.8.1 Published
Please use this keyword if the report has an ISBN or ISSN number.

A.8.2 Published as a report or conference paper
Please use this code for reports which do not have an ISBN or ISSN number (eg. 'internal' reports; conference papers)

A.8.3 Unpublished

e.g. thesis or author manuscript

A.9 Language (please specify)

A.9.1 Details of Language of report
Please use as many keywords that apply

If the name of the language is specified/known
then please use the name as a keyword. For example:

Dutch
English
French

If non-English and you cannot name the language:
non English

Section B: Study Aims and Rationale

B.1 What are the broad aims of the study?
Please write in authors' description if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretation. Other, more specific questions about the research questions and hypotheses are asked later.

B.1.1 Explicitly
stated (please specify)

B.1.2 Implicit (please specify)

B.1.3 Not stated/unclear (please specify)

B.2 What is the purpose of the study?
N.B. This question refers only to the purpose of a study, not to the design or methods used.

A: Description
Please use this code for studies in which the aim is to produce a description of a state of affairs or a

particular phenomenon, and/or to document its characteristics. In these types of studies there is no attempt to evaluate a particular intervention programme (according to either the processes involved in its implementation or its effects on outcomes), or to examine the associations between one or more variables. These types of studies are usually, but not always, conducted at one point in time (i.e. cross sectional). They can include studies such as an interview of head teachers to count how many have explicit policies on continuing professional development for teachers; a study documenting student attitudes to national examinations using focus groups; a survey of the felt needs of parents using self-completion questionnaires, about whether they want a school bus service.

B: Exploration of relationships
Please use this code for a study type which examines relationships and/or statistical associations between variables in order to build theories and develop hypotheses. These studies may describe a process or processes (what goes on) in order to explore how a particular state of affairs might be produced, maintained and changed.

These relationships may be discovered using qualitative techniques, and/or statistical analyses. For instance, observations of children at play may elucidate the process of gender stereotyping, and suggest the kinds of interventions which may be appropriate to reduce any negative effects in the classroom. Complex statistical analysis may be helpful in modelling the relationships between parents' social class and language in the home. These may lead to the development of theories about the mechanisms of language acquisition, and possible policies to intervene in a causal pathway.

These studies often consider variables such as social class and gender which are not interventions, although these studies may aid understanding, and may suggest possible interventions, as well as ways in which a programme design and implementation could be improved. These studies do not directly evaluate the effects of policies and practices.

C: What works
A study will only fall within this category if it measures effectiveness - i.e. the impact of a specific intervention or programme on a defined sample of recipients or subjects of the programme or intervention.

D: Methods development
Studies where the principle focus is on methodology.

E: Reviewing/Synthesising research
Studies which summarise and synthesise primary research studies.

B.2.1 A: Description

B.2.2 B: Exploration of relationships

B.2.3 C: What works?

B.2.4 D: Methods development

B.2.5 E: Reviewing/synthesising research

B.3 why was the study done at that point in time, in those contexts and with those people or institutions?

Please write in authors' rationale if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretation. B.3.1 Explicitly stated (please specify)

B.3.2 Implicit (please specify)

B.3.3 Not stated/unclear (please specify)

B.4 Was the study informed by, or linked to, an existing body of empirical and/or theoretical research?

Please write in authors' description if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretation.B.4.1 Explicitly stated (please specify)

B.4.2 Implicit (please specify)

B.4.3 Not stated/unclear (please specify)

B.5 Which of the following groups were consulted in working out the aims of the study, or issues to be addressed in the study?

Please write in authors' description if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretation. Please cover details of how and why people were consulted and how they influenced the aims/issues to be addressed.

B.5.1 Researchers (please specify)

B.5.2 Funder (please specify)

B.5.3 Head teacher/Senior management (please specify)

B.5.4 Teaching staff (please specify)

B.5.5 Non-teaching staff (please specify)

B.5.6 Parents (please specify)

B.5.7 Pupils/students (please specify)

B.5.8 Governors (please specify)

B.5.9 LEA/Government officials (please specify)

B.5.10 Other education practitioner (please specify)

B.5.11 Other (please specify)

B.5.12 None/Not stated

B.5.13 Coding is based on: Authors' description

B.5.14 Coding is based on: Reviewers' inference

B.6 Do authors report how the study was funded?

B.6.1 Explicitly stated (please specify)

B.6.2 Implicit (please specify)

B.6.3 Not stated/unclear (please specify)

B.7 When was the study carried out?

If the authors give a year, or range of years, then put that in. If not, give a 'not later than' date by looking for a date of first submission to the journal, or for clues like the publication dates of other reports from the study.

B.7.1 Explicitly stated (please specify)

B.7.2 Implicit (please specify)

B.7.3 Not stated/unclear (please specify)

B.8 What are the study research questions and/or hypotheses?

Research questions or hypotheses operationalise the aims of the study. Please write in authors'description if there is one.

Elaborate if necessary, but indicate which aspects are reviewers' interpretation.

B.8.1 Explicitly stated (please specify)

B.8.2 Implicit (please specify)

B.8.3 Not stated/ unclear (please specify)

Section C: Study Policy or Practice Focus

C.1 What is/are the topic focus/foci of the study?

C.1.1 Assessment (please specify)

C.1.2 Classroom management (please specify)

C.1.3 Curriculum (see next question below)

C.1.4 Equal opportunities (please specify)

C.1.5 Methodology (please specify)

C.1.6 Organisation and management (please specify)

C.1.7 Policy (please specify)

C.1.8 Teacher careers (please specify)

C.1.9 Teaching and learning (please specify)

C.1.10 Other (please specify)

C.1.11 Coding is based on: Authors' description

C.1.12 Coding is based on: Reviewers' inference

C.2 What is the curriculum area, if any?

C.2.1 Art

C.2.2 Business Studies

C.2.3 Citizenship

C.2.4 Cross-curricular

C.2.5 Design & Technology

C.2.6 Environment

C.2.7 General

C.2.8 Geography

C.2.9 Hidden

C.2.10 History

C.2.11 ICT

C.2.12 Literacy - first languages

C.2.13 Literacy - further languages

C.2.14 Literature

C.2.15 Maths

C.2.16 Music

C.2.17 PSE

C.2.18 Phys. Ed

C.2.19 Religious Ed.

C.2.20 Science

C.2.21 Vocational

C.2.22 Other

C.2.23 Coding is based on: Authors' description

C.2.24 Coding is based on: Reviewers' inference

C.3 What is/are the educational setting(s) of the study?

C.3.1 Community centre

C.3.2 Correctional institution

C.3.3 Government department

C.3.4 Higher education institution

C.3.5 Home

C.3.6 Independent school

C.3.7 Local education authority

C.3.8 Nursery school

C.3.9 Other early years setting

C.3.10 Post-compulsory education institution

C.3.11 Primary school

C.3.12 Pupil referral unit

C.3.13 Residential school

C.3.14 Secondary school

C.3.15 Special needs school

C.3.16 Workplace

C.3.17 Other educational setting

C.3.18 Coding is based on: Authors' description

C.3.19 Coding is based on: Reviewers' inference

C.4 In which country or countries was the study carried out?

Provide further details where relevant e.g. region or

city.

C.4.1 Explicitly stated (please specify)

C.4.2 Not stated/unclear (please specify)

C.5 Please describe in more detail the specific phenomena, factors, services or interventions with which the study is concerned.

The questions so far have asked about the aims of the study and any named programme under study, but this may not fuly capture what the study is about. Please state or clarify here.

C.5.1 Details

Section D: Actual sample

If there are several samples or levels of sample, please complete for each level

D.1 Who or what is/are the sample in the study?

Please use AS MANY codes AS APPLY to describe the nature of the sample of the report. Only indicate a code if the report specifically characterises the sample focus in terms of the categories indicated below

D.1.1 Learners

Please use this code if a population focus of the study is on pupils, students, apprentices, or other kinds of learners

D.1.2 Senior management

Please use this code if a sample focu of the study is on those with responsibility in any educational institution for the strategic leadership and management of a whole organisation.

This will include the person with ultimate responsibility for the educational institution under study. In the school setting, the term 'headteacher' is typically used ('principal' in the U.S.A., Canada and Australia); the term 'principal' is often used in a college setting, the term 'vice-chancellor' in a university setting.

D.1.3 Teaching staff

Please use this code if a sample focus of the study is on

staff who teach (or lecture) in a classroom/lecture-hall setting

D.1.4 Non-teaching staff

Please use this code if a population focus of the study is on staff who do not teach, but whose role within the educational institution is administrative/ organisational, e.g. equal opportunities coordinators, other support staff

D.1.5 Other educational practitioners

Please use this code if the sample focus of the study includes representatives from other educational bodies, including interest/advisory groups; school govorning bodies and parent support groups

D.1.6 Government

Please use this code if the sample focus of the study is on

representatives from government or governing bodies e.g. from the DfES (Department for Education and Skills), BECTA (British Educational Communications and Technology Agency), LSDA (learning and Skills Development Agency, formerly FEDA - Further Education Development Agency) etc.

D.1.7 Local educaiotn authority officers

Please use this code if a sample focus of the study is people who work in a local education authority

D.1.8 Parents

Please use this code if the sample focus of the study refers to the inclusive category of carers of ‘children’ and ‘young people’, which may include natural parents/mother/father/adoptive parents/foster parents etc

D.1.9 Governors

Please use this code if the sample focus of the study is on members of the governing body, whikch may include teachers or parents. They play a role in the management and vision of the educational institution

D.1.10 Other sample focus (please specify)

D.2 What was the total number of participants in the study (the actual sample)?

if more than one group is being compared, please give numbers for each group

D.2.1 Not applicable (e.g study of policies, documents etc)

D.2.2 Explicitly stated (please specify)

D.2.3 Implicit (please specify)

D.2.4 Not stated/ unclear (please specify)

D.3 What is the proportion of those selected for the study who actually participated in the study?

Please specify numbers and percentages if possible.D.3.1 Not applicable (e.g. review)

D.3.2 Explicitly stated (please specify)

D.3.3 Implicit (please specify)

D.3.4 Not stated/unclear (please specify)

D.4 Which country/countries are the individuals in the actual sample from?

If UK, please distinguish between England, Scotland, N. Ireland and Wales, if possible. If from different countries, please give numbers for each.

If more than one group is being compared, please describe for each

group.

D.4.1 Not applicable (e.g. study of policies, documents, etc.)

D.4.2 Explicitly stated (please specify)

D.4.3 Implicit (please specify)

D.4.4 Not stated/unclear (please specify)

D.5 If the individuals in the actual sample are involved with an educational institution, what type of institution is it?
For evaluations of interventions, this will be the site(s) of the intervention.

Please give details of the institutions (e.g. size, geographic location mixed/single sex etc.) as described by the authors. If individuals are from different institutions, please give numbers for each. If more than one group is being compared, please describe all of the above for each group.

D.5.1 Not applicable (e.g. study of policies, documents, etc.)

D.5.2 Community centre (please specify)

D.5.3 Post-compulsory education institution (please specify)

D.5.4 Government Department (please specify)

D.5.5 Independent school (please specify age range and school type)

D.5.6 Nursery school (please specify)

D.5.7 Other early years setting (please specify)

D.5.8 Local education authority (please specify)

D.5.9 Higher Education Institution (please specify)

D.5.10 Primary school (please specify)

D.5.11 Correctional Institution (please specify)

D.5.12 Pupil referral unit (please specify)

D.5.13 Residential school (please specify)

D.5.14 Secondary school (please specify age range)

D.5.15 Special needs school (please specify)

D.5.16 Workplace (please specify)

D.5.17 Other educational setting (please specify)

D.5.18 Coding is based on: Authors' description

D.5.19 Coding is based on: Reviewers' inference

D.6 What ages are covered by the actual sample?

Please give the numbers of the sample that fall within each of the given categories. If necessary refer to a

page number in the report

(e.g. for a useful table).

If more than one group is being compared, please describe for each group if follow-up study, age of entry to the study

D.6.1 Not applicable (e.g. study of policies, documents etc)

D.6.2 0-4

D.6.3 5-10

D.6.4 11-16

D.6.5 17 to 20

D.6.6 21 and over

D.6.7 Not stated/unclear (please specify)

D.6.8 Coding is based on: Authors' description

D.6.9 Coding is based on: Reviewers' inference

D.7 What is the sex of the individuals in the actual sample?

Please give the numbers of the sample that fall within each of the given categories. If necessary refer to a page number in the report

(e.g. for a useful table).

If more than one group is being compared, please describe for each group.

D.7.1 Not applicable (e.g. study of policies, documents etc)

D.7.2 Single sex (please specify)

D.7.3 Mixed sex (please specify)

D.7.4 Not stated/unclear (please specify)

D.7.5 Coding is based on: Authors' description

D.7.6 Coding is based on: Reviewers' inference

D.8 What is the socio-economic status of the individuals within the actual sample?

If more than one group is being compared, please describe for each group.

D.8.1 Not applicable (e.g. study of policies, documents etc)

D.8.2 Explicitly stated (please specify)

D.8.3 Implicit (please specify)

D.8.4 Not stated/unclear (please specify)

D.9 What is the ethnicity of the individuals within the actual sample?

If more than one group is being compared, please describe for each group.

D.9.1 Not applicable (e.g. study of policies,

documents etc)

D.9.2 Explicitly stated (please specify)

D.9.3 Implicit (please specify)

D.9.4 Not stated/unclear (please specify)

D.10 What is known about the special educational needs of individuals within the actual sample? e.g. specific learning, physical, emotional, behavioural, intellectual difficulties.D.10.1 Not applicable (e.g. study of policies, documents etc)

D.10.2 Explicitly stated (please specify)

D.10.3 Implicit (please specify)

D.10.4 Not stated/unclear (please specify)

D.11 Please specify any other useful information about the study participants.

D.11.1 Details

Section E: Programme or Intervention description

E.1 If a programme or intervention is being studied, does it have a formal name?

E.1.1 Not applicable (no programme or intervention)

E.1.2 Yes (please specify)

E.1.3 No (please specify)

E.1.4 Not stated/ unclear (please specify)

E.2 Content of the intervention package

Describe the intervention in detail, whenever possible copying the authors' description from the report word for word. If specified in the report, also describe in detail what the control/ comparison group(s) were exposed to.

E.2.1 Details

E.3 Aim(s) of the intervention

E.3.1 Not stated

E.3.2 Not explicitly stated (Write in, as worded by the reviewer)

E.3.3 Stated (Write in, as stated by the authors)

E.4 Year intervention started

Where relevant

E.4.1 Details

E.5 Duration of the intervention

Choose the relevant category and write in the exact intervention length if specified in the report

When the intervention is ongoing, tick ‘OTHER’ and indicate the length of intervention as the length of the outcome assessment

period

E.5.1 Not stated

E.5.2 Not applicable

E.5.3 Unclear

E.5.4 One day or less (please specify)

E.5.5 1 day to 1 week (please specify)

E.5.6 1 week (and 1 day) to 1 month (please specify)

E.5.7 1 month (and 1 day) to 3 months (please specify)

E.5.8 3 months (and 1 day) to 6 months (please specify)

E.5.9 6 months (and 1 day) to 1 year (please specify)

E.5.10 1 year (and 1 day) to 2 years (please specify)

E.5.11 2 years (and 1 day) to 3 years (please specify)

E.5.12 3 years (and 1 day) to 5 years (please specify)

E.5.13 more than 5 years (please specify)

E.5.14 Other (please specify)

E.6 Person providing the intervention (tick as many as appropriate)

E.6.1 Not stated

E.6.2 Unclear

E.6.3 Not applicable

E.6.4 Counsellor

E.6.5 Health professional (please specify)

E.6.6 parent

E.6.7 peer

E.6.8 Psychologist

E.6.9 Researcher

E.6.10 Social worker

E.6.11 Teacher/lecturer

E.6.12 Other (specify)

E.7 Number of people recruited to provide the intervention (and comparison condition) (e.g. teachers or health professionals)

E.7.1 Not stated

E.7.2 Unclear

E.7.3 Reported (include the number for the providers involved in the intervention and comparison groups, as appropriate)

E.8 How were the people providing the intervention recruited? (Write in) Also, give information on the providers involved in the comparison group(s), as appropriate.

E.8.1 Not stated

E.8.2 Stated (write in)

E.9 Was special training given to people providing the intervention?

Provide as much detail as possible

E.9.1 Not stated

E.9.2 Unclear

E.9.3 Yes (please specify)

E.9.4 No

Section F: Results and conclusions

In future this section is likely to incorporate material from EPPI reviewer to facilitate reporting numberical results

F.1 How are the results of the study presented?

e.g. as quotations/ figures within text, in tables, as

appendices

F.1.1 Details

F.2 What are the results of the study as reported by the authors?

Before completing data extraction you will need to consider what type of synthesis will be undertaken and what kind of 'results' data is required for the synthesis

Warning! Failure to provide sufficient data here will hamper the synthesis stage of the review.

Please give details and refer to page numbers in the report(s) of the study, where necessary (e.g. for key tables)

F.2.1 Details

F.3 What do the author(s) conclude about the findings of the study? Please give details and refer to page numbers in the report of the study, where necessary

F.3.1 Details

Section G: Study Method

G.1 Study Timing

Please indicate all that apply and give further details where possible

-If the study examines one or more samples but each at only one point in time it is cross-sectional

-If the study examines the same samples but as they have changed over time, it is a retrospective, provided that the interest is in starting at one timepoint and looking backwards over time

-If the study examines the same samples as they have changed over time and if data are collected forward over time, it is prospective provided that the interest is in starting at one timepoint and looking forward in time

G.1.1 Cross-sectional

G.1.2 Retrospective

G.1.3 Prospective

G.1.4 Not stated/ unclear (please specify)

G.2 when were the measurements of the variable(s) used as outcome measures made, in relation to the intervention

Use only if the purpose of the study is to measure the effectiveness or impact of an intervention or programme i.e its purpose is coded as 'What Works' in Section B2 -

If at least one of the outcome variables is measured both before and after the intervention, please use the 'before and after' category.

G.2.1 Not applicable (not an evaluation)

G.2.2 Before and after

G.2.3 Only after

G.2.4 Other (please specify)

G.2.5 Not stated/unclear (please specify)

G.3 What is the method used in the study?

NB: Studies may use more than one method please code each method used for which data extraction is being completed and the respective outcomes for each method.

A=Please use this code if the outcome evaluation employed the design of a randomised controlled trial. To be classified as an RCT, the evaluation must:

i). compare two or more groups which receive different interventions or different intensities/levels of an intervention with each other; and/or with a group which does not receive any intervention at all

AND

ii) allocate participants (individuals, groups, classes, schools, LEAs etc) or sequences to the different groups based on a fully random schedule (e.g a random numbers table is used). If the report states that random allocation was used and no further information is given then please keyword as RCT. If the allocation is NOT fully randomised (e.g allocation by alternate numbers by date of birth) then please keyword as a non-randomised controlled trial

B=Please use this code if the evaluation compared two or more groups which receive different interventions, or different intensities/levels of an intervention to each other and/or with a group which does not receive any intervention at all BUT DOES NOT allocate participants (individuals, groups, classes, schools, LEAs etc) or sequences in a fully random manner. This keyword should be used for studies which describe groups being allocated using a quasi-random method (e.g allocation by alternate numbers or by date of birth) or other non- random method

C=Please use this code where a group of subjects e.g. a class of school children is tested on outcome of interest before being given an intervention which is being evaluated. After receiving the intervention the same test is administered again to the same subjects. The outcome is the difference between the pre and post test scores of the subjects.

D=Please use this code where one group of subjects is tested on outcome of interest after receiving the intervention which is being evaluated

E=Please use this code where researchers prospectively study a sample (e.g learners), collect data on the different aspects of policies or practices experienced by members of the sample (e.g time to measure their later outcomes (e.g achievement) and relate the experiences to the outcomes achieved. The purpose is to assess the effect of the different experiences on outcomes.

F=Please use this code where researchers compare two or more groups of individuals on the basis of their current situation (e.g 16 year old pupils with high current educational performance compared to those with average educational performance), and look back in time to examine the statistical association with different policies or practices which they have experienced (e.g class size; attendance at single sex or mixed sex schools; non school activities etc).

G= please use this code where researchers have used a quesionnaire to collect quantitative information about items in a sample or population e.g parents views on education

H= Please use this code where the the researchers try to understand phenonmenon from the point of the 'worldview' of a particular, group, culture or society. In these studies there is attention to subjective meaning, perspectives and experience'.

I= please use this code when the researchers present a qualitative description of human social phenomena, based on fieldwork

J= please use this code if the review is explicit in its reporting of a systematic strategy used for (i) searching for studies (i.e it reports which databases have been searched and the keywords used to search the database, the list of journals hand searched, and describes attempts to find unpublished or 'grey' literature;

(ii) the criteria for including and excluding studies in the review and,

(iii) methods used for assessing the quality and collating the findings of included studies.

K= Please use this code for cases where the review discusses a particular issue bringing together the opinions/findings/conclusions from a range of previous studies but where the review does not meet the criteria for a systematic review (as defined above)

L= please use this code when researchers refer specifically to their design/ approach as a 'case study'. Where possible further information about the methods used in the case study should be coded

M=please use this code where researchers have used documents as a source of data e.g newspaper reports

N=Please use this code where practitioners or institutions (with or without the help of researchers) have

used research as part of a process of development and/or change. Where possible further information about the research methods used should be coded

O=please use this keyword for studies which focus on the development or discussion of methods; for example discussions of a statistical technique, a recruitment or sampling procedure, a particular way of collecting or analysing data etc. It may also refer to a description of the processes or stages involved in developing an 'instrument' (e.g an assessment procedure).

P= Please use this code where researchers have used data from a pre-existing dataset e.g The British Household Panel Survey to answer their 'new' research question.

G.3.1 A=Random experiment with random allocation to groups

G.3.2 B=Experiment with non-random allocation to groups

G.3.3 C=One group pre-post test

G.3.4 D=one group post-test only

G.3.5 E=Cohort study

G.3.6 F=Case-control study

G.3.7 G=Statistical survey

G.3.8 H=Views study

G.3.9 I=Ethnography

G.3.10 J=Systematic review

G.3.11 K=Other review (non systematic)

G.3.12 L=Case study

G.3.13 M= Document study

G.3.14 N=Action research

G.3.15 O= Methodological study

G.3.16 P=Secondary data analysis

Section H: Methods-groups

H.1 If Comparisons are being made between two or more groups*, please specify the basis of any divisions made for making these comparisons

Please give further details where possible

*If no comparisons are being made between groups please continue to

Section I (Methods - sampling strategy)

H.1.1 Not applicable

(not more than one group)

H.1.2 Prospective allocation into more than one groupe.g allocation to different interventions, or allocation to intervention and control groups

H.1.3 No prospective allocation but use of pre-existing differences to create comparison groups e.g. receiving different interventions or characterised by different levels of a variable such as social class

H.1.4 Other (please specify)

H.1.5 Not stated/ unclear (please specify)

H.2 How do the groups differ?

H.2.1 Not applicable (not in more than one group)

H.2.2 Explicitly stated (please specify)

H.2.3 Implicit (please specify)

H.2.4 Not stated/ unclear (please specify)

H.3 Number of groups

For instance, in studies in which comparisons are made between group, this may be the number of groups into which the dataset is divided for analysis (e.g social class, or form size), or the number of groups allocated to, or receiving, an intervention.

H.3.1

Not applicable (not more than one group)

H.3.2 One

H.3.3 Two

H.3.4 Three

H.3.5 Four or more (please specify)

H.3.6 Other/ unclear (please specify)

H.4.5 Other (e.g individuals or groups acting as their own controls - please specify)

H.4.6 Not stated/ unclear (please specify)

H.5 If prospective allocation into more than one group, which method was used to generate the allocation sequence?

H.5.1 Not applicable (not more than one group)

H.5.2 Not applicable (no prospective allocation)

H.5.3 Random

H.5.4 Quasi-random

H.5.5 Non-random

H.5.6 Not stated/unclear (please specify)

H.6 If prospective allocation into more than one group, was the

allocation sequence concealed?

Bias can be introduced, consciously or otherwise, if the allocation of pupils or classes or schools to a programme or intervention is made in the knowledge of key characteristics of those allocated. For example, children with more serious reading difficulty might be seen as in greater need and might be more likely to be allocated to the 'new' programme, or the opposite might happen. Either would introduce bias.H.6.1 Not applicable (not more than one group)

H.6.2 Not applicable (no prospective allocation)

H.6.3 Yes (please specify)

H.6.4 No (please specify)

H.6.5 Not stated/unclear (please specify)

H.7 Study design summary

In addition to answering the questions in this section, describe the study design in your own words. You may want to draw upon and elaborate on the answers already given.

H.7.1 Details

Section I: Methods - Sampling strategy

I.1 Are the authors trying to produce findings that are representative of a given population?

Please write in authors' description. If authors do not specify, please indicate reviewers' interpretation.I.

1.1 Explicitly stated (please specify)

I.1.2 Implicit (please specify)

I.1.3 Not stated/unclear (please specify)

I.2 What is the sampling frame (if any) from which the partipants are chosen? e.g.telephone directory, electoral register, postcode, school listings etc.

There may be two stages - e.g. first sampling schools and then classes or pupils within them.I.2.1 Not applicable (please specify)

I.2.2 Explicitly stated (please specify)

I.2.3 Implicit (please specify)

I.2.4 Not stated/unclear (please specify)

I.3 Which method does the study use to select people, or groups of people (from the sampling frame)?

e.g. selecting people at random, systematically - selecting, for example, every 5th person, purposively, in order to reach a quota for a given characteristic.

I.3.1 Not applicable (no sampling frame)

I.3.2 Explicitly stated (please specify)

I.3.3 Implicit (please specify)

I.3.4 Not stated/unclear (please specify)

I.4 Planned sample size

If more than one group, please give details for each group separately.

In intervention studies, the sample size will have a bearing upon the statistical power, error rate and precision of estimate of the study.

I.4.1 Not applicable (please specify)

I.4.2 Explicitly stated (please specify)

I.4.3 Not stated/unclear (please specify)

I.5 How representative was the achieved sample (as recruited at the start of the study) in relation to the aims of the sampling frame?

Please specify basis for your decision.I.5.1 Not applicable (e.g. study of policies, documents, etc.)

I.5.2 Not applicable (no sampling frame)

I.5.3 High (please specify)

I.5.4 Medium (please specify)

I.5.5 Low (please specify)

I.5.6 Unclear (please specify)

I.6 If the study involves studying samples prospectively over time, what proportion of the sample dropped out over the course of the study?

If the study involves more than one group, please give drop-out rates for each group separately. If necessary, refer to a page number in the report (e.g. for a useful table).

I.6.1 Not applicable (e.g. study of policies, documents, etc.)

I.6.2 Not applicable (not following samples prospectively over time)

I.6.3 Explicitly stated (please specify)

I.6.4 Implicit (please specify)

I.6.5 Not stated/unclear (please specify)

I.7 For studies that involve following samples prospectively over time, do the authors provide any information on whether, and/or how, those who dropped out of the study differ from those who remained in the study?

I.7.1 Not applicable (e.g. study of policies, documents, etc.)

I.7.2 Not applicable (not following samples prospectively over time)

I.7.3 Not applicable (no drop outs)

I.7.4 Yes (please specify)

I.7.5 No

I.8 If the study involves following samples prospectively over time, do authors provide baseline values of key variables, such as those being used as outcomes, and relevant socio-demographic variables?

I.8.1 Not applicable (e.g. study of policies, documents, etc.)

I.8.2 Not applicable (not following samples prospectively over time)

I.8.3 Yes (please specify)

I.8.4 No

Section J: Methods - recruitment and consent

J.1 Which methods are used to recruit people into the study? e.g. letters of invitation, telephone contact, face-to-face contact.

J.1.1 Not applicable (please specify)

J.1.2 Explicitly stated (please specify)

J.1.3 Implicit (please specify)

J.1.4 Not stated/unclear (please specify)

J.1.5 Please specify any other details relevant to recruitment and consent

J.2 Were any incentives provided to recruit people into the study?

J.2.1 Not applicable (please specify)

J.2.2 Explicitly stated (please specify)

J.2.3 Not stated/unclear (please specify)

J.3 Was consent sought?

Please comment on the quality of consent, if relevant.

J.3.1 Not applicable (please specify)

J.3.2 Participant consent sought

J.3.3 Parental consent sought

J.3.4 Other consent sought

J.3.5 Consent not sought

J.3.6 Not stated/unclear (please specify)

Section K: Methods - Data Collection

K.1 Which variables or concepts, if any, does the study aim to measure or examine?

K.1.1 Explicitly stated (please specify)

K.1.2 Implicit (please specify)

K.1.3 Not stated/ unclear

K.2 Please describe the main types of data collected and specify if they were used to (a) to define the sample; (b) to measure aspects of the sample as findings of the study?

Only detail if more specific than the previous question

K.2.1 Details

K.3 Which methods were used to collect the data?

Please indicate all that apply and give further detail where possible

K.3.1 Curriculum-based assessment

K.3.2 Focus group interview

K.3.3 One-to-one interview (face to face or by phone)

K.3.4 Observation

K.3.5 Self-completion questionnaire

K.3.6 self-completion report or diary

K.3.7 Examinations

K.3.8 Clinical test

K.3.9 Practical test

K.3.10 Psychological test (e.g I.Q test)

K.3.11 Hypothetical scenario including vignettes

K.3.12 School/ college records (e.g attendance records etc)

K.3.13 Secondary data such as publicly available statistics

K.3.14 Other documentation

K.3.15 Not stated/ unclear (please specify)

K.3.16 Please specify any other important features of data collection

K.3.17 Coding is based on: Author's description

K.3.18 Coding is based on: Reviewers' interpretation

K.4 Details of data collection intruments or tool(s).

Please provide details including names for all tools used to collect data, and examples of any questions/ items given. Also, please state whether source is cited in the report

K.4.1 Explicitly stated

(please specify)

K.4.2 Implicit (please specify)

K.4.3 Not stated/ unclear (please specify)

K.5 Who collected the data?

Please indicate all that apply and give further detail where possible

K.5.1 Researcher

K.5.2 Head teacher/ Senior management

K.5.3 Teaching or other staff

K.5.4 Parents

K.5.5 Pupils/ students

K.5.6 Governors

K.5.7 LEA/Government officials

K.5.8 Other educational practitioner

K.5.9 Other (please specify)

K.5.10 Not stated/unclear

K.5.11 Coding is based on: Author's description

K.5.12 Coding is based on: Reviewers' inference

K.6 Do the authors' describe any ways they addressed the repeatability or reliability of their data collection tools/methods?e.g test-re-test methods

(where more than one tool was employed, please provide details for each)

K.6.1 Details

K.7 Do the authors describe any ways they have addressed the validity or trustworthiness of their data collection tools/methods? e.g mention previous piloting or validation of tools, published version of tools, involvement of target population in development of tools.

(Where more than one tool was employed, please provide details for each)

K.7.1 Details

K.8 Was there a concealment of which group that subjects were assigned to (i.e. the intervention or control) or other key factors from those carrying out measurement of outcome - if relevant?

Not applicable - e.g analysis of existing data, qualitative study.

No - e.g assessment of reading progress for dyslexic pupils done by teacher who provided intervention

Yes - e.g researcher assessing pupil knowledge of drugs - unaware of whether pupil received the intervention

or not.

K.8.1 Not applicable (please say why)

K.8.2 Yes (please specify)

K.8.3 No (please specify)

K.9 Where were the data collected?

e.g school, home

K.9.1 Educational Institution (please specify)

K.9.2 Home (please specify)

K.9.3 Other institutional setting (please specify)

K.9.4 Not stated/ unclear (please specify)

Section L: Methods - data analysis

L.1 What rationale do the authors give for the methods of analysis for the study?e.g. for their methods of sampling, data collection or analysis.

L.1.1 Details

L.2 Which methods were used to analyse the data? Please give details (e.g., for in-depth interviews, how were the data handled?)

Details of statistical analyses can be given next.

L.2.1

Explicitly stated (please specify)

L.2.2 Implicit (please specify)

L.2.3 Not stated/unclear (please specify)

L.2.4 Please specify any important analytic or statistical issues

L.3 Which statistical methods, if any, were used in the analysis?

L.3.1 Details

L.4 Did the study address multiplicity by reporting ancillary analyses, including sub-group analyses and adjusted analyses, and do the authors report on whether these were pre-specified or exploratory?

L.4.1 Yes (please specify)

L.4.2 No (please specify)

L.4.3 Not applicable

L.5 Do the authors describe strategies used in the analysis to control for bias from confounding variables?

L.5.1 Yes (please specify)

L.5.2 No

L.5.3 Not applicable

L.6 For evaluation studies that use prospective allocation, please specify the basis on which data analysis was carried out.

'Intention to intervene' means that data were analysed on the basis of the original number of participants, as recruited into the different groups.

'Intervention received' means data were analysed on the basis of the number of participants actually receiving the intervention.

L.6.1 Not applicable (not an evaluation study with prospective allocation)

L.6.2 'Intention to intervene'

L.6.3 'Intervention received'

L.6.4 Not stated/unclear (please specify)

L.7 Do the authors describe any ways they have addressed the repeatability or reliability of data analysis? e.g. using more than one researcher to analyse data, looking for negative cases.

L.7.1 Details

L.8 Do the authors describe any ways that they have addressed the validity or trustworthiness of data analysis? e.g. internal or external consistency, checking results with participants.

Have any statistical assumptions necessary for analysis been met?

L.8.1 Details

L.9 If the study uses qualitative methods, how well has diversity of perspective and content been explored?

L.9.1 Details

L.10 If the study uses qualitative methods, how well has the detail, depth and complexity (i.e. the richness) of the data been conveyed?

L.10.1 Details

L.11 If the study uses qualitative methods, has analysis been conducted such that context is preserved? In qualitative approaches interpretation of meaning is derived from the words and actions of the actors within particular context(s). We are therefore interested in whether the approach to analysis in any individual study sufficiently incorporates relevant variations contextual features

L.11.1 Details

Section M: Quality of study - reporting

M.1 Is the context of the study adequately described? Consider your previous answers to these questions (see Section B):

why was this study done at this point in time, in those contexts and with those people or institutions? (B3)

Was the study informed by, or linked to an existing body of empirical and/or theoretical research? (B4)

Which groups were consulted in working out the aims to be addressed in this study? (B5)

Do the authors report how the study was funded? (B6)

When was the study carried out? (B7)

M.1.1 Yes (please specify)

M.1.2 No (please specify)

M.2 Are the aims of the study clearly reported?

Consider your previous answers to these questions (See module B):

What are the broad aims of the study? (B1)

What are the study research questions and/or hypothesis?

(B8)M.2.1 Yes (please specify)

M.2.2 No (please specify)

M.3 Is there an adequate description of the sample used in the study and how the sample was identified and recruited?

Consider your answer to all questions in sections D (Actual Sample),

I (Sampling Strategy) and J (Recruitment and Consent).M.3.1

Yes (please specify)

M.3.2 No (please specify)

M.4 Is there an adequate description of the methods used in the study to collect data?

Consider your answers to the following questions (See Section K)

What methods were used to collect the data? (K3)

Details of data collection instruments and tools (K4)

Who collected the data? (K5)

Where were the data collected? (K9)M.4.1 Yes (please specify)

M.4.2 No (please specify)

M.5 Is there an adequate description of the methods of data analysis? Consider your answers to previous

questions (see module L)

Which methods were used to analysis the data? (L2)

What statistical method, if any, were used in the analysis? (L3)

Did the study address multiplicity by reporting ancillary analyses (including sub-group analyses and adjusted analyses), and do the authors report on whether these were pre-specified or exploratory? (L4)

Do the authors describe strategies used in the analysis to control for bias from counfounding variables? (L5)

M.5.1 Yes (please specify)

M.5.2 No (please specify)

M.6 Is the study replicable from this report?

M.6.1 Yes (please specify)

M.6.2 No (please specify)

M.7 Do the authors state where the full, original data are stored?

M.7.1 Yes (please specify)

M.7.2 No (please specify)

M.8 Do the authors avoid selective reporting bias? (e.g. do they report on all variables they aimed to study, as specified in their aims/research questions?)

M.8.1 Yes (please specify)

M.8.2 No (please specify)

Section N: Quality of the study - Weight of evidence

N.1 Are there ethical concerns about the way the study was done? Consider consent, funding, privacy, etc.

N.1.1 Yes, some concerns (please specify)

N.1.2 No (please specify)

N.2 Were students and/or parents appropriately involved in the design or conduct of the study? Consider your answer to the appropriate question in module

B.1N.2.1 Yes, a lot (please specify)

N.2.2 Yes, a little (please specify)

N.2.3 No (please specify)

N.3 Is there sufficient justification for why the study was done the way it was? Consider answers to questions B1, B2, B3, B4N.3.1 Yes (please specify)

N.3.2 No (please specify)

N.4 Was the choice of research design appropriate for addressing the research question(s) posed?

N.4.1 yes, completely (please specify)

N.4.2 No (please specify)

N.5 Have sufficient attempts been made to establish the repeatability or reliability of data collection methods or tools? Consider your answers to previous questions:

Do the authors describe any ways they have addressed the reliability or repeatability of their data collection tools and methods (K7)

N.5.1 Yes, good (please specify)

N.5.2 Yes, some attempt (please specify)

N.5.3 No, none (please specify)

N.6 Have sufficient attempts been made to establish the validity or trustworthiness of data collection tools and methods? Consider your answers to previous questions:

Do the authors describe any ways they have addressed the validity or trustworthiness of their data collection tools/ methods (K6)

N.6.1 Yes, good (please specify)

N.6.2 Yes, some attempt (please specify)

N.6.3 No, none (please specify)

N.7 Have sufficient attempts been made to establish the repeatability or reliability of data analysis? Consider your answer to the previous question:

Do the authors describe any ways they have addressed the repeatability or reliability of data analysis? (L7)

N.7.1 Yes (please specify)

N.7.2 No (please specify)

N.8 Have sufficient attempts been made to establish the validity or trustworthiness of data analysis? Consider your answer to the previous question:

Do the authors describe any ways they have addressed the validity or trustworthiness of data analysis? (L8, L9, L10, L11)N.8.1 Yes, good (please specify)

N.8.2 Yes, some attempt (please specify)

N.8.3 No, none (please specify)

N.9 To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study?

e.g. (1) In an evaluation, was the process by which participants were allocated to, or otherwise received the factor being evaluated, concealed and not predictable in advance? If not, were sufficient substitute procedures employed with adequate rigour to rule out any alternative explanations of the findings which arise as a result?

e.g. (2) Was the attrition rate low and, if applicable, similar between different groups?N.9.1 A lot (please specify)

N.9.2 A little (please specify)

N.9.3 Not at all (please specify)

N.10 How generalisable are the study results?

N.10.1 Details

N.11 In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study?

Please state what any difference is.N.11.1 Not applicable (no difference in conclusions)

N.11.2 Yes (please specify)

N.12 Have sufficient attempts been made to justify the conclusions drawn from the findings, so that the conclusions are trustworthy?

N.12.1 Not applicable (results and conclusions inseparable)

N.12.2 High trustworthiness

N.12.3 Medium trustworthiness

N.12.4 Low trustworthiness

N.13 Weight of evidence A: Taking account of all quality assessment issues, can the study findings be trusted in answering the study question(s)?

In some studies it is difficult to distinguish between the findings of the study and the conclusions. In those cases, please code the trustworthiness of these combined results/conclusions.

N.13.1 High trustworthiness

N.13.2 Medium trustworthiness

N.13.3 Low trustworthiness

N.14 Weight of evidence B: Appropriateness of research design and analysis for addressing the question, or sub-questions, of this specific systematic review.

N.14.1 High

N.14.2 Medium

N.14.3 Low

N.15 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

N.15.1 High

N.15.2 Medium

N.15.3 Low

N.16 Weight of evidence D: Overall weight of evidence. Taking into account quality of execution, appropriateness of design and relevance of focus, what is the overall weight of evidence this study provides to answer the question of this specific systematic review?

N.16.1 High

N.16.2 Medium

N.16.3 Low

Section O: This section provides a record of the review of the study

O.1 Sections completed

Please indicate sections completed.

O.1.1 Section A:

Administrative details

O.1.2 Section B: Study aims and rationale

O.1.3 Section C: Study policy or practice focus

O.1.4 Section D: Actual sample

O.1.5 Section E: Programme or intervention description

O.1.6 Section F: Results and conclusions

O.1.7 Section G: Methods - study method

O.1.8 Section H: Methods - groups

O.1.9 Section I: Methods - sampling strategy

O.1.10 Section J: Methods recruitment and consent

O.1.11 Section K: Methods - data collection

O.1.12 Section L: Methods - data analysis

O.1.13 Section M: Quality of study - reporting

O.1.14 Section N: WoE A: Quality of the study - methods and data

O.1.15 Section N: WoE B: Appropriateness of research design for review question

O.1.16 Section N: WoE C: Relevance of particular focus of the study to review question

O.1.17 Section N: WoE D: Overall weight of evidence this study provides to answer this review question?

O.1.18 Reviewing record

O.2 Please use this space here to give any general feedback about these data extraction guidelines

O.2.1 Details

O.3 Please use this space to give any feedback on how these guidelines apply to your Review Group's field of interest

O.3.1 Details

Review-specific keywords

Type of employer engagement in course development	Curriculum design Curriculum development Curriculum delivery Assessment of students Quality assurance and review Whole of course Part of course Other (please specify) Not specified
Type of impact	On students On graduates On employers On the institution On academics On administration Other (please specify) Not specified
Type of qualifications	First degree Foundation degree Other HE qualification at undergraduate level HE but not specified FE level 3 qualifications and above

APPENDIX 2.5 What is the purpose of the study?

Item ID	Publication details	What is the purpose of the study?
IT33924	Allen S, Williams A (2005) Measuring engagement between industry and higher education in the built engagement sector	B: Exploration of relationships D: Methods development
IT34383	Centre for Developing and Evaluating Lifelong Learning (2000) Graduate Apprenticeship Pilot Projects. Evaluation report - Second stage	C: What works?
IT34384	Centre for Developing and Evaluating Lifelong Learning (2001) Graduate Apprenticeship Development. Second Stage Projects. Evaluation Report	C: What works?
IT33936	Connor H (2005) Workforce development and higher education	A: Description
ITT496478	Cox S, King D (2006) Skill Sets: An Approach to Embed Employability in Course Design	B: Exploration of relationships
IT34460	Education and Training Inspectorate and The Quality Assurance Agency for Higher Education (2003) Report of a survey. The provision of the pilot programme of Foundation Degrees in seven colleges of further and higher education	C: What works? E: Reviewing/synthesising research
IT33923	Foskett R (2005) Collaborative partnership in the higher education curriculum: a cross-sector study of foundation degree development	C: What works?
ITT496493	Foskett R (2005) Collaborative Partnership between HE and Employers: A Study of Workforce Development	A: Description
IT33947	Greenbank P (2002) Undergraduate work experience: an alternative approach using micro businesses	C: What works?
IT33941	Hillier Y, Rawnsley T (2006) Education, education, education of employers, education and equity: managing employer and employee expectations of foundation degrees	C: What works?
IT33925	Kinman R, Kinman G (2000) “What’s that got to do with making motor cars?” The influence of corporate culture on in-company degree programmes	C: What works?
ITT502920	Ladkin A, Peacock N (December 2002) Exploring relationships between higher education and industry: a case study of a university and the local tourism industry.	B: Exploration of relationships
IT33946	Leslie D, Richardson A (1999) Work placement in UK undergraduate programmes. Student expectations and experiences	C: What works?

IT33940	Mason G, Williams G, Crammer S, Guile D (2003) How much does higher education enhance the employability of graduates?	A: Description
IT33927	McCoshan A, Costello M, Souto Otero M (2005) Work-based learning providers' views on their links with employers	C: What works?
IT33933	Ryan P, Gospel H, Lewis P (2006) Educational and contractual attributes of the apprenticeship programmes of large employers in Britain	A: Description
IT34463	Sheehan C (2006) Foundation Degree assessment models. Meeting the needs of the new generation of higher level students on hospitality management foundation degrees	A: Description E: Reviewing/synthesising research
IT34462	Step Ahead Research Ltd and RCU Ltd (2004 One North-East. Foundation Degrees: Supply and demand in North-East England	A: Description
IT33935	The KSA Partnership (2006) Workplace learning in the North East	B: Exploration of relationships
IT34459	The Quality Assurance Agency for Higher Education (2003) Overview report on Foundation Degree reviews	E: Reviewing/synthesising research
IT34456	The Quality Assurance Agency for Higher Education (2005) Learning from reviews of Foundation Degrees in England carried out in 2004–2005	E: Reviewing/synthesising research
IT34457	The Quality Assurance Agency for Higher Education (2005) Report of a survey of Foundation Degree converted from existing Higher National Diplomas since 2001	C: What works?
IT34458	The Quality Assurance Agency for Higher Education (2005) Report of a survey to follow up Foundation Degree reviews carried out in 2002–2003	C: What works?
IT33938	The Quality Assurance Agency for Higher Education (2006) Outcomes from institutional audit. Institutions' work with employers and professional, statutory and regulatory bodies	E: Reviewing/synthesising research
IT33939	The Quality Assurance Agency for Higher Education (2006) Outcomes from institutional audit. Work-based and placement learning, and employability	E: Reviewing/synthesising research
IT33934	Thomas S, Busby S (2003) Do industry collaborative projects enhance students' learning?	A: Description C: What works?
IT33945	Thomas S, Grimes D (2003) Evaluating the integration of key skills and NVQs into an undergraduate degree programme: a case study from the graduate apprenticeship initiative	C: What works?
IT34461	York Consulting (2004) Evaluation of Foundation Degrees final report	A: Description

What impact does employer engagemennt have in employers and students ? Does it answer the question?

Item ID	Item	What impact does employer engagement in course development have on employers and students? Does it answer the question?
IT34383	Centre for Developing and Evaluating Lifelong Learning (2000) Graduate Apprenticeship Pilot Projects. Evaluation report – Second stage	**NO**. The generic findings reported (which are based on seven first-round graduate apprenticeships) are not directly related to the question; they focus on the term 'apprentice', the pilot projects' timescales, shortage of Graduate Apprenticeships, project management, funding, Accredited Prior Learning (APL), key skill evidence, whether the GA concept is breaking new ground, impact upon HE planning, sustainability on a national scale.
IT34384	Centre for Developing and Evaluating Lifelong Learning (2001) Graduate Apprenticeship Development. Second Stage Projects. Evaluation Report	**NO** (see above). The brief generic findings reported (which are based on eight second-round graduate apprenticeships) are not directly related to the question.
IT34460	Education and Training Inspectorate and the Quality Assurance Agency for Higher Education (2003) Report of a survey. The provision of the pilot programme of Foundation Degrees in seven colleges of further and higher education	**NO**. The findings are mostly descriptive and at the macro level.
IT33923	Foskett (2005) Collaborative partnership in the higher education curriculum: a cross-sector study of foundation degree development	**NO**. The findings focus on the factors underpinning successful collaborations – on the barriers (in the context of the management of the process of collaboration). Uses quotes, but mostly from the Higher Education Institution involved.
IT33947	Greenbank (2002) Undergraduate work experience: an alternative approach using micro businesses	**YES**. The findings focus on students' and owner¬-mangers' expectations and experiences of work placements.
IT33941	Hillier and Rawnsley (2006) Education, education, education of employers, education and equity: managing employer and employee expectations of foundation degrees	**YES**. The findings focus on employers' and students'/employees' perspectives of learning outcomes, and the challenges/tensions of involvement in the programme.

IT33925	Kinman and Kinman (2000) "What's that got to do with making motor Cars?" The influence of corporate culture on in-company degree programmes	**YES**. The findings focus on how students/employees approached learning/assessment, their motivations for taking part in a degree course (effects of company culture upon learning: surface/instrumental approach), absence of student culture in 'in-company' delivery.
IT33946	Leslie and Richardson (1999) Work placement in UK undergraduate programmes. Student expectations and experiences	**YES**. The findings focus on students' expectations and experiences of student work experience.
IT33927	McCoshan et al. (2005) Work-based learning providers' views on their links with employers	**NO**. Research is undertaken from the providers' perspective. Findings focus on what works well in establishing effective relationships with employers and the barriers.
IT34457	Quality Assurance Agency for Higher Education (2005) Report of a survey of Foundation Degree converted from existing Higher National Diplomas since 2001	**NO**. The findings describe how the partnership between HEIs/FECs and employers occurs (e.g. how feedback is collected, attendance at meetings, extent of involvement in curriculum design/assessment). It doesn't indicate what works well (or doesn't) and why.
IT34458	Quality Assurance Agency for Higher Education (2005) Report of a survey to follow up Foundation Degree reviews carried out in 2002–2003	**YES**, PARTIALLY. The findings are at the 'macro' level and are generally descriptive of how things occur. There are some examples of impact/effectiveness although whether the occupational area is relevant to this review is not made clear.
IT33934	Thomas and Busby (2003 Do industry collaborative projects enhance students' learning?	**YES**. The findings focus on the benefits of 'live projects' for students and industry partners.
IT33945	Thomas and Grimes (2003) Evaluating the integration of key skills and NVQs into an undergraduate degree programme: a case study from the graduate apprenticeship initiative	**YES**. The findings focus on the student learning experience of a day-release/work-based learning programme.
IT34461	York Consulting (2004) Evaluation of Foundation Degrees final report	**YES**, PARTIALLY. The findings are generally descriptive and focus on how things occur (or not). There are some examples of impact/effectiveness although often the example is an occupational area excluded from this review or is not identified.

APPENDIX 3.1 Details of studies included in the systematic map

Item ID	Item	Study aims and rationale	Study policy or practice focus	Actual sample	Method
IT33924	Allen and Williams (2005) Measuring engagement between industry and higher education in the built engagement sector	**What are the broad aims of the study?** Explicitly stated (please specify) *The study aims to 'assess the extent of university-industry collaboration in the UK's built environment sector and to measure the impact of such activity'* **What is the purpose of the study?** B: Exploration of relationships D: Methods development **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What sustained engagement activities and established collaborations were collected from the built environment sector using a standard template?* *How can the quality of industry engagement be measured and what are the appropriate key performance indicators of that measurement?*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *FE college* Workplace Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Learners	**What is the method used in the study?** L=Case study O= Methodological study
IT34383	Centre for Developing and Evaluating Lifelong Learning (2000) Graduate Apprenticeship Pilot Projects. Evaluation report – Second stage	**What are the broad aims of the study?** Explicitly stated (please specify) *To undertake an evaluation of seven Graduate Apprenticeship pilot projects.* *Reviewer's elaboration* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *How is each project progressing? What needs to be done in order to ensure that the GA concept and framework design may be successfully transferred to other business sectors in the future?* Reviewer's interpretation	**What is/are the educational setting(s) of the study?** Higher education institution Workplace Other educational setting *National Training Organisations* *Training and Enterprise Councils* *Private training providers*	**Who or what is/are the sample in the study?** Learners *Graduate apprentices* Other sample focus (please specify) *Project managers of the seven GA projects;* *Representatives of the organisations involved in the partnerships;* *Steering Group members.*	**What is the method used in the study?** L=Case study

IT34384	Centre for Developing and Evaluating Lifelong Learning (2001) Graduate Apprenticeship Development. Second Stage Projects. Evaluation Report	**What are the broad aims of the study?** Explicitly stated (please specify) *To evaluate the second round of apprenticeship projects funded by DfES. The second round fell into three categories: continuation of graduate apprenticeship projects; Diplomate projects (GA programme for students working at sub-degree level); two projects investigating alternative models for the Graduate Apprenticeship.* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) How is each project progressing? What lessons can be learned? Reviewer's interpretation	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *FE colleges* Workplace Other educational setting *National Training Organisations;* *private training providers*	**Who or what is/are the sample in the study?** Learners *Graduate apprentices* Other sample focus (please specify) *Representatives of project partner organisations;* *Project managers*	**What is the method used in the study?** L=Case study
IT33936	Connor (2005) Workforce development and higher education	**What are the broad aims of the study?** Explicitly stated (please specify) *The paper aims to pull together conclusions and lessons from the work the Council for Industry and Higher Education has undertaken to date on the role of workforce development in higher education.* Reviewer's interpretation **What is the purpose of the study?** A: Description **What are the study research questions and/or hypotheses?** Implicit (please specify) *What is meant by workface development?* *What are the key issues for HE and businesses?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution **What is/are the educational setting(s) of the study?** Workplace Other educational setting *Training by professional bodies such as CIPD and SEMTA*	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Case studies*	**What is the method used in the study?** L=Case study

ITT496478	Cox and King (2006) Skill Sets: An Approach to Embed Employability in Course Design	**What are the broad aims of the study?** Explicitly stated (please specify) *'To demonstrate an innovative approach to embedding employability in the design of a university degree scheme using skills sets* **What is the purpose of the study?** B: Exploration of relationships **What are the study research questions and/or hypotheses?** Implicit (please specify) *How do skill sets embed employability into course design?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Employers recruiters of graduates from the university.*	**What is the method used in the study?** H=Views study L=Case study O= Methodological study
IT34460	Education and Training Inspectorate and the Quality Assurance Agency for Higher Education (2003) Report of a survey. The provision of the pilot programme of Foundation Degrees in seven colleges of further and higher education	**What are the broad aims of the study?** Implicit (please specify) *To review the nature and the standards of FD provision in Northern Ireland* C: What works? E: Reviewing/synthesising research **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What is the quality of the student learning experiences including the development of work-based learning?* *To what extent have pilot degree courses widened access for learners in higher education?* *What are the standards of work and levels of student achievement, including articulation routes to bachelor degree courses?* *What is the involvement of employers in the design, implementation and review of the programmes?* *What are the management arrangements and quality assurance procedures?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Learners Senior management Teaching staff Non-teaching staff Other sample focus (please specify) *Employers*	**What is the method used in the study?** H=Views study M= Document study

IT33923	Foskett (2005) Collaborative partnership in the higher education curriculum: a cross-sector study of foundation degree development	**What are the broad aims of the study?** Explicitly stated (please specify) *'The aim of the study was to investigate the perceived benefits of collaborative partnership for undergraduate curriculum development from the perspectives of the participants and the barriers to building effective relationships.'* **What is the purpose of the study?** B: Exploration of relationships **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the experiences of developing foundation degree programmes for a consortium involving employer groups in the private and public sector, six further education colleges and a research-led university? Reviewer's interpretation.*	**What is/are the educational setting(s) of the study?** Higher education institution Local education authority Post-compulsory education institution *Further education colleges* Workplace Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Learners Senior management Teaching staff Non-teaching staff Other sample focus (please specify) *employer representatives*	**What is the method used in the study?** H=Views study L=Case study M= Document study
ITT496493	Foskett (Aug 2005) Collaborative partnership between HE and employers: a study of workforce development	**What are the broad aims of the study?** Explicitly stated (please specify) *To explore the interface between the two governmental policies of promoting collaborative partnerships in HE and the widening participation agenda through a case-study of an employer-led curriculum development for a group of people who had so far been excluded from higher education. Paraphrased author's description.* **What is the purpose of the study?** A: Description **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the perceived aims and benefits of undergraduate partnership for undergraduate curriculum development from the perspective of the various participants taking part in the collaboration? Reviewer's interpretation.*	**What is/are the educational setting(s) of the study?** Higher education institution Workplace *Charitable organisation that provides guide dog and is also involved in providing training for its workforce.* Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Learners Teaching staff Non-teaching staff Other educational practitioners Other sample focus (please specify) *Employer members*	**What is the method used in the study?** H=Views study L=Case study M= Document study

IT33947	Greenbank (2002) Undergraduate work experience: an alternative approach using micro businesses	**What are the broad aims of the study?** Explicitly stated (please specify) *'To consider the use of micro-businesses for undergraduate placements on business and management courses.'* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the experiences of placing first year business and management students in the smallest SMEs, i.e. in micro-businesses.* *What are the dynamics and processes involved in the work placement experience*	**What is/are the educational setting(s) of the study?** Higher education institution Workplace	**Who or what is/are the sample in the study?** Learners *Year 1 students in Business and Management from Edge Hill College of Higher Education* Other sample focus (please specify) *Owner-managers of micro-businesses: i.e. printing services and video store*	**What is the method used in the study?** L=Case study
IT33941	Hillier and Rawnsley (2006) Education, education, education of employers, education and equity: managing employer and employee expectations of foundation degrees	**What are the broad aims of the study?** Explicitly stated (please specify) *'How do we engage with employers in work-based learning programmes? How much should they be involved, and what experiences do they have? How do employees manage their dual identities of student and employee when engaging in work based learning? This paper will examine some of these issues through a case study of one specific form of work based learning, the Foundation Degree'.* **What is the purpose of the study?** B: Exploration of relationships C: What works? **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *'What outcomes do employers expect from the programme and to what extent do employers believe these have been attained?* *What evidence is there of these outcomes?* *What expectations do students have of the programme and to what extent are these expectations met?* *What is the evidence that these outcomes have been met?* *Where expectations and outcomes are not met what factors preventing their achievement were perceived by the student and the employer?* *Where student and employer perceptions of the programme at variance, what forms do the variances take?* *What factors in the work place most predominantly enabled students to achieve?* *What factors in the work place most predominantly prevented students' abilities to a*chieve?	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education college* Workplace Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Learners *Employee are also students on FD course* Other sample focus (please specify) *Employers and employees who had participated in the Foundation Degree.*	**What is the method used in the study?** H=Views study L=Case study

IT33925	Kinman and Kinman (2000) "What's that got to do with making motor cars?" The influence of corporate culture on in-company degree programmes	**What are the broad aims of the study?** Explicitly stated (please specify) *To explore the recent experience of in-company education of a group of managers from a major UK motor manufacturer, and to look at the difficulties participants faced as students in the light of the prevailing corporate culture. Ways for minimising these difficulties are suggested.* **What is the purpose of the study?** B: Exploration of relationships C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the potential adverse implications of the model of delivery, i.e. in-company delivery, used in this case study?* *Is such a model likely to be effective in helping to provide the broader educational benefits sought by employers?* *What is the effect of a powerful organisational culture upon the learning process?* *Reviewer's interpretation.*	**What is/are the educational setting(s) of the study?** Higher education institution Workplace	**Who or what is/are the sample in the study?** Learners Teaching staff *Academic staff* Other sample focus (please specify) *Middle and senior managers at the UK site of a large, multi-national car manufacturing company*	**What is the method used in the study?** H=Views study L=Case study
ITT502920	Ladkin and Peacock (2002) Exploring relationships between higher education and industry: a case study of a university and the local tourism industry.	**What are the broad aims of the study?** Explicitly stated (please specify) *'to explore relationships between a university and its local tourism industry' and to investigate various types of industry-education links: 'recruitment, employers preference in graduate skills, work experience and placements, industry involvement in course design, training for the tourism industry, the use of industry of university products and services and industry's views on forging links with education'.* **What is the purpose of the study?** B: Exploration of relationships **What are the study research questions and/or hypotheses?** Implicit (please specify) *What is the relationship between a university that is renowned for its tourism and hospitality expertise and the local tourism industry?* *What is the nature of their links in areas such as 'recruitment, work experience and placements, training for industry and the use of other 'services to business' provided by the university'?* *What barriers exist to the forging of effective relationships?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Workplace Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Representatives of local tourism businesses such as accommodation, attraction, transport, entertainment, tour operators and travel agents.*	**What is the method used in the study?** G=Statistical survey H=Views study L=Case study

IT33946	Leslie and Richardson (1999) Work placement in UK undergraduate programmes. Student expectations and experiences	**What are the broad aims of the study?** Explicitly stated (please specify) *The aim of the study is to investigate 'the expectations and experiences of students studying tourism management courses', as well as 'to examine and evaluate the approach to the management, and administration of SWE in departments offering tourism degree programmes'* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *What is the approach adopted by educational institutions to the planning, organisation and administration of the industrial experience stage?* *What are the perceptions and attitudes of students to this experience before and after the experience?* *What is the involvement and attitude of employers?* *Reviewer's elaboration of author's text*	**What is/are the educational setting(s) of the study?** Higher education institution Workplace Coding is based on: Reviewers' inference	**Who or what is/are the sample in the study?** Learners *Students on undergraduate Tourism Management courses* Non-teaching staff *Industrial tutors* Other sample focus (please specify) *Employers*	**What is the method used in the study?** H=Views study
IT33940	Mason et al. (2003) How much does higher education enhance the employability of graduates	**What are the broad aims of the study?** Explicitly stated (please specify) *'A key aim (...) is to identify what a sample of university departments claim to be doing with respect to employability skills development and to try and form a view of the extent to which this affects various measures of labour market performance of their graduates'.* **What is the purpose of the study?** A: Description **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What are the respondents' views on: the definition of employability; learning, teaching and assessment of employment related skills and knowledge; employer involvement with programme of study; student work experience and other employability initiatives.* *Reviewer's interpretation.*	**What is/are the educational setting(s) of the study?** Higher education institution Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Teaching staff Non-teaching staff *Career staff*	**What is the method used in the study?** G=Statistical survey H=Views study

IT33927	McCoshan et al. (2005) Work-based learning providers' views on their links with employers	**What are the broad aims of the study?** Explicitly stated (please specify) '*• To establish providers' views on what works well/has not worked well in establishing effective relationships with employers and meeting their needs and why this has happened* *• To look at different types of provider to examine the effect that different factors have on the ability to engage with employers* *• To seek to establish if Work Based Learning Plans (Work-based Learning Plans) are better able to meet the need of employers when compared to Further Education colleges* *• To identify any barriers to increased responsiveness to employers perceived by WBLPs and how they think these could be tackled* *• To identify what policy changes or incentives might help WBLPs to be more responsive to employer demand* *• To examine the effect of the Success for All and Skills Strategy reforms on attitude and activity towards employer responsiveness in WBLPs* *• To seek examples of good practice for dissemination to all providers.'* **What is the purpose of the study?** B: Exploration of relationships C: What works? **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) How do work based-learning providers establish effective relationships with employers, what works well and why? What barriers do providers face to increased responsiveness and how can they be addressed? What are the factors affecting providers' responsiveness to employers? What is the effect of national policies on provider attitudes to and activities regarding employer responsiveness?	**What is/are the educational setting(s) of the study?** Post-compulsory education institution *FE college* Workplace	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Work based learning providers managers - unclear whether this is teaching or non teaching staff also other 'stakeholders'*	**What is the method used in the study?** G=Statistical survey H=Views study L=Case study

IT33933	Ryan et al. (2006) Educational and contractual attributes of the apprenticeship programmes of large employers in Britain	**What are the broad aims of the study?** Explicitly stated (please specify) *'The authors consider two-quality related aspects of large employers' apprenticeship programmes. The first is their contribution to national educational objectives, including the creation and strengthening of ladders of vocational attainment. (...) The second issue is the extent of the employer's responsibility for its apprenticeship programme (...).'* **What is the purpose of the study?** A: Description **What are the study research questions and/or hypotheses?** *Explicitly stated (please specify)* *To which extent large employers' apprenticeship programmes promote educational attainment and progression?* *How do employers organise their apprenticeship programmes and what that implies for training methods and quality?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Workplace	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Large employers in the five sectors indicated above; mainly training-related managers*	**What is the method used in the study?** G=Statistical survey H=Views study
IT34463	Sheehan C (2006) Foundation Degree assessment models. Meeting the needs of the new generation of higher level students on hospitality management foundation degrees	**What are the broad aims of the study?** Explicitly stated (please specify) *The study aimed to 'investigate the needs, at institutional and industry level, to review existing assessment strategies* **What is the purpose of the study?** A: Description E: Reviewing/synthesising research **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the challenges learning providers and industry professionals will face in developing more vocationally relevant forms of assessment whilst simultaneously preserving academic rigour?*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education college*	**Who or what is/are the sample in the study?** Learners Teaching staff *academic practitioners* Other sample focus (please specify) *employer*	**What is the method used in the study?** H=Views study K=Other review (non systematic)

IT34462	Step Ahead Research Ltd and RCU Ltd (2004) One North-East. Foundation Degrees: Supply and demand in North-East England	**What are the broad aims of the study?** Explicitly stated (please specify) *'To understand in more depth the demand for and supply of Foundation Degrees in the North East of England, and the interaction between employers and colleges of Further Education and Higher Education Institutions'.* **What is the purpose of the study?** A: Description **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What is the current provision of Foundation Degree (FD) across the region?* *What available data is there on employer and provider experiences of Foundation Degrees and what does it tell us?* *What is the extent of employer awareness of Foundation Degree?* *What advanced technical/associate professional skills shortages and skills gaps are there in the North East that new and revised Foundation Degrees could fill?* *What are the gaps in level 3 provision that may adversely affect current and future progression onto Foundation Degrees? Reviewer's interpretation* *In particular the interviews with employers 'aimed to understand the current and potential demand for FDs from the employer perspective and to explore how FDs fit in with employers' perceptions of career paths and internal promotion ladders'.*	**What is/are the educational setting(s) of the study?** Government department *Sector Skills Councils* Higher education institution Post-compulsory education institution *Further Education colleges; Sixth Forms* Workplace *Employers*	**Who or what is/are the sample in the study?** Other educational practitioners *Staff from HEIs, FECs and Sixth Forms but the level of seniority and/or functions are not specified* Government *Sector Skills Council personnel* Other sample focus (please specify) *Employers*	**What is the method used in the study?** H=Views study M= Document study

IT33935	KSA Partnership (2006) Workplace learning in the North East	**What are the broad aims of the study?** Explicitly stated (please specify) *The study aims to 'investigate the issue that impact on the relationship between learning and work, and how policy intervention by the Higher Education Funding Council for England (HEFCE) and other national and regional agencies might encourage the expansion of workplace learning in the North East England'.* **What is the purpose of the study?** B: Exploration of relationships **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What is the nature, purposes and outcomes of workplace learning in the North East?* *What is the position of workplace learning in the region, taking account of the regional skills strategy and action plan and sub-regional skills initiatives?* *What are the pattern of learner choices by subject and mode, and the pattern of their choices to enter employment and/or higher education?* *How might changes in the HE sector impact on this mode of learning, given that debt aversion and the introduction of variable fees could increase demand for workplace learning in the region?* *Reviewer's paraphrase of author's text.*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges* Workplace Other educational setting *Private training providers* *Training provided by professional bodies* *Training provided by local/regional public bodies* *Charitable organisations*	**Who or what is/are the sample in the study?** Other sample focus (please specify) *28 case studies in five different sectors (creative and cultural industries, energy cluster industries, health and social care, voluntary and community sector). For each the authors present a description; relationship to the typology; employer engagement; engagement of other stakeholders; funding, issues arising.*	**What is the method used in the study?** L=Case study
IT34459	Quality Assurance Agency for Higher Education (2003) Overview report on Foundation Degree reviews	**What are the broad aims of the study?** Explicitly stated (please specify) *The report aims to 'present the findings from the reviews of Foundation Degrees (FDs) in England conducted by the QAA during 2003'.* **What is the purpose of the study?** E: Reviewing/synthesising research **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What are the distinctive features of the FDs as set out in the HEFCE's FD Prospectus 00/27?* *What is the quality of the student experience?* *Are the programmes reviewed likely to meet the standards of the FD award as defined in The Framework for Higher Education Qualifications in England, Wales and NI; and the FD Qualifications Benchmark?*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Reports of QAA reviews of 33 FD programmes*	**What is the method used in the study?** K=Other review (non systematic)

IT34456	Quality Assurance Agency for Higher Education (2005) Learning from reviews of Foundation Degrees in England carried out in 2004–2005	**What are the broad aims of the study?** Explicitly stated (please specify) *'To summarise findings of the FD reviews undertaken by the QAA in England in 2004-05'* *'to identify areas of innovation and good practice for wider dissemination, as well as strengths and recommendations for the further development of FDs'.* **What is the purpose of the study?** E: Reviewing/synthesising research **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *- To what extent do programmes align with the defining characteristics of the FD award as set out in the Foundation Degree: qualification benchmark?* *- Does the programme meet, or is likely to meet, the academic standards of an FD?* *- What is the quality of students' learning experience?* *- What are the innovative features and good practice worthy of dissemination?*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Other sample focus (please specify) *'The review programme sampled 68 FDs, reflecting a representative range of disciplines, partnership arrangements, geographical regions, modes of study and student cohorts'.*	**What is the method used in the study?** K=Other review (non systematic)
IT34457	Quality Assurance Agency for Higher Education (2005) Report of a survey of Foundation Degree converted from existing Higher National Diplomas since 2001	**What are the broad aims of the study?** Explicitly stated (please specify) *To review the development and delivery of a sample of FDs converted since 2001 from existing Higher National Diplomas (HNDs)* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What are the reasons why institutions choose to convert and existing HND to a FD?* *To which extent the design of FDs converted from HNDs matches the defining characteristics of an FD as set out in the Foundation Degree: qualification benchmark?* *What are the features of good practice and innovation?* *What are the areas needing further development?* *What are the characteristics of the FDs converted from HNDs that distinguish them from other FDs?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Other sample focus (please specify) *39 Foundation Degree courses converted from existing HNDs*	**What is the method used in the study?** M= Document study

IT34458	Quality Assurance Agency for Higher Education (2005) Report of a survey to follow up Foundation Degree reviews carried out in 2002-2003	**What are the broad aims of the study?** Explicitly stated (please specify) *This is a survey to find out how the 34 Foundation Degrees have developed since they were first surveyed in 2002-03. In particular the survey aims to:* *- 'identify developments and changes since the reviews* *- analyse student achievement* *- identify areas for FD development* *- identify good practice and innovation* *- identify developing practice in work-based learning (WBL)* *- consider the integration of academic studies and WBL* *- make recommendations for the future development of FDs.'* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *The key questions used as the framework for the review are:* *What is the educational context (including consortia) of the programmes under review, how have the programmes evolved and what level of employer engagement has there been?* *How are the programmes operating (aims and intended learning outcomes, learning and teaching, assessment and student support arrangements)?* *What issues are emerging with regard to student recruitment and achievement?* *What learning resources are being used?* *Reviewer's interpretation.*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Responses to a survey of the 34 FDs reviewed in 2002-03*	**What is the method used in the study?** H=Views study M= Document study

IT33938	Quality Assurance Agency for Higher Education (2006) Outcomes from institutional audit. Institutions' work with employers and professional, statutory and regulatory bodies	**What are the broad aims of the study?** Implicit (please specify) *To investigate the extent to which higher education institutions engage with professional, statutory and regulatory bodies and with employers by reviewing the institutional audit reports published up to November 2004.* *Reviewer's interpretation.* **What is the purpose of the study?** E: Reviewing/synthesising research What are the study research questions and/or hypotheses? Implicit (please specify) *What is the nature of higher education institutions' work with employers and with professional, statutory and regulatory bodies?* *What are the features of good practice*?	**What is/are the educational setting(s) of the study?** Higher education institution	**Who or what is/are the sample in the study?** Other sample focus (please specify) *Seventy institutional audit reports of English higher education institutions published between 2002 and November 2004*	**What is the method used in the study?** K=Other review (non systematic)
IT33939	Quality Assurance Agency for Higher Education (2006) Outcomes from institutional audit. Work-based and placement learning, and employability	**What are the broad aims of the study?** Explicitly stated (please specify) *To investigate work-based and placement learning provision and employability in higher education institutions in England through the analysis of institutional audit reports, and to draw attention to features of good practice.* *Reviewer's interpretation.* **What is the purpose of the study?** E: Reviewing/synthesising research **What are the study research questions and/or hypotheses?** Implicit (please specify) *What is the nature of work-based and placement learning in English universities?* *What are the definitions/interpretations of employability?* *What are the features of good practice?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Other sample focus (please specify) *70 institutional audit reports from English higher education institutions*	**What is the method used in the study?** K=Other review (non systematic)

IT33934	Thomas and Busby (2003) Do industry collaborative projects enhance students' learning?	**What are the broad aims of the study?** Explicitly stated (please specify) *'The aim of this paper is to investigate the use of a live project in the teaching of undergraduate programmes.'* **What is the purpose of the study?** A: Description C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the expectations and perceptions of industry partners, tutors and students involved in a live project experience at Birmingham College of Food, Tourism and Creative Studies (BCFTCS)?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Learners Teaching staff Other sample focus (please specify) *Representatives of industry partners*	**What is the method used in the study?** H=Views study F=Case control study
IT34461	York Consulting (2004) Evaluation of Foundation Degrees final report	**What are the broad aims of the study?** Explicitly stated (please specify) *To provide an early insights into FD activities to inform policy.* **What is the purpose of the study?** A: Description C: What works? **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What is current nature and range of Foundation Degrees?* *What are the characteristics and attitudes of current FD students?* *To which extent the FD activities that have been developed and are being delivered are contributing to the achievement of the foundation degree objectives?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Learners *full and part time FD students* Senior management *senior managers with a strategic role in the development of FDs in HEIs and FECs* Teaching staff *lecturers and tutors* Non-teaching staff *programme leaders, course directors*	**What is the method used in the study?** H=Views study L=Case study P= Secondary data analysis

IT33945	Thomas and Grimes (2003) Evaluating the integration of key skills and NVQs into an undergraduate degree programme: a case study from the graduate apprenticeship initiative	**What are the broad aims of the study?** Explicitly stated (please specify) *The article 'reports on a pilot graduate apprenticeship in hospitality management, currently delivered at Birmingham College of Food, Tourism and Creative Studies (BCFTCS)'.* **What is the purpose of the study?** C: What works? **What are the study research questions and/or hypotheses?** Implicit (please specify) *What are the key outcomes to emerge from an evaluation of the design and implementation of the first year of delivering the graduate apprenticeship programme to people in employment who complete the taught elements of the course on a part time basis?* *What is the process of integrating key skills and NVQs into an existing programme?* *What is the added value to the student learning experience?* *What ae the main benefits and challenges arising from a programme involving a coalescence of key skills, HE awards and NVQs from the students, employers and institutional perspectives?* *Reviewer's interpretation.*	**What is/are the educational setting(s) of the study?** Higher education institution Workplace Coding is based on: Authors' description	**Who or what is/are the sample in the study?** Learners Teaching staff Non-teaching staff Other sample focus (please specify) *Student employers*	**What is the method used in the study?** E=Cohort study L=Case study
IT34461	York Consulting (2004) Evaluation of Foundation Degrees final report	**What are the broad aims of the study?** Explicitly stated (please specify) *To provide an early insights into FD activities to inform policy.* **What is the purpose of the study?** A: Description C: What works? **What are the study research questions and/or hypotheses?** Explicitly stated (please specify) *What is current nature and range of Foundation Degrees?* *What are the characteristics and attitudes of current FD students?* *To which extent the FD activities that have been developed and are being delivered are contributing to the achievement of the foundation degree objectives?* *Reviewer's interpretation*	**What is/are the educational setting(s) of the study?** Higher education institution Post-compulsory education institution *Further education colleges*	**Who or what is/are the sample in the study?** Learners *full and part time FD students* Senior management *senior managers with a strategic role in the development of FDs in HEIs and FECs* Teaching staff *lecturers and tutors* Non-teaching staff *programme leaders, course directors*	**What is the method used in the study?** H=Views study L=Case study P= Secondary data analysis

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

Greenbank P (2002) Undergraduate work experience: an alternative approach using micro businesses

Aims of the study – including research questions/ hypothesis

The study analyses the experiences of placing first year business and management students in the smallest small and medium-sized enterprises (SMEs), i.e. in micro-businesses and the dynamics and processes involved in the work placement experience.

Description of the intervention or programme

The intervention consists in a work-based project for a local organisation during a three-week period. 'The aim of the work experience projects was to encourage students to link theory and practice and to enable them to develop their transferable skills' (p 262).

Summary of study – design and sample

Two case studies of placements of Year 1 students in micro-businesses are reported. Semi-structured interviews and informal discussions were held before, during and after the students' work experience. Interviews and discussions were held with individual students, the groups of students and the placement providers. Direct observation by the author was also undertaken. Each student was required to produce a written piece of work on their experience.

Data collection and analysis

There is insufficient data on data collection tools and analysis to make an assessment of how the analysis was undertaken.

Summary of results

The author states that 'the students' experience with a micro-business (the printers) may have reinforced the negative views they held of such businesses prior to their placement... the owner-manager's experience with the students may have put him off utilising students in placements and employing graduates' (p 265).

'...the owner-managers (of the video store) trusted them and allowed them the flexibility to work around their part-time jobs. They were especially pleased to see that their ideas were being implemented... The students also felt they had been able to learn from the owner-managers, each other and the author – but more importantly from working out between themselves how to tackle problems of which they had little or no practical experience... There was evidence of ...'expansive learning', where the students were adapting their existing knowledge and skills to meet the needs of this new situation...the students were required to work with different computer software that they used at the college, but they were quickly able to learn how to operate it' (p 265).

'The printer said he found the placement a waste of time... the video store were extremely pleased with the outcome. The students had designed a promotional campaign which was already having positive results. Moreover, the process of carrying out market research had raised awareness of the video store and the other activities they were involved in ... which had led to an increase in sales and profits' (p 265-6).

'Further research is needed to discover what graduates are experiencing in the micro-business sector' (p 266).

'The students in these case studies, particularly those placed with the video store, demonstrated an appreciation of applying and developing their skills.

This was achieved by asking them to reflect on what they had learned as part of an assignment' (p. 266).

'..both micro-businesses wanted the students to apply more formalised methods' (to resolving business problems) ... 'Problems arose in the printers because the owner-manager had little understanding how to manage this process... the case studies help to illustrate the importance of the mediating role of the academic tutor. In particular, the pre-placement briefings prepare both the students and the work experience providers for the placement... the academic tutor needs to act as mentor for both business and the students... it seems from these case studies that there may also be an expectation that undergraduates on placements are able to provide an immediate contribution, with little direction or assistance' (p. 267).

'...academic tutors need to be sensitive to the perceptions and concerns that placement providers may possess' (p. 268).

Conclusion and weight of evidence

Placements in micro-businesses 'offer a vehicle for linking theory and practice and developing the students' transferable skills. As such they provide useful experience for both self-employment and employment in small and large organisations. The micro-businesses can obtain the benefit of undertaking projects that would otherwise not be carried out.... There is, however, a need for further research into how micro-businesses are currently using graduates... graduates may be under-employed. There is also a need to ensure that the work experience gained in micro-businesses is valued by larger organisations... there is scope for more research into how skills are developed and the mechanisms by which skills become transferable' (p 268).

'...the mentoring role of the academic tutor is crucial to the success of the placement. Both the students and the placement provider need to be adequately prepared for the placement if it is to be successful... the process also needs a mentor with the relevant expertise, time and resources to manage the process effectively... Further research needs to be carried out into the management of work experience in micro-businesses... Additional case studies that confirm the findings of this paper would increase our ability to generalise' (p 268).

Weight of evidence A: Low trustworthiness

Weight of evidence B: Low

Weight of evidence C: Medium

Weight of evidence D: Overall weight of evidence Medium

Hillier and Rawnsley (2006) Education, education, education of employers, education and equity: managing employer and employee expectations of foundation degrees

Aims of the study

This is case study of one specific form of work based learning, the Foundation Degree, and examines issues such as: 'How do we engage with employers in work-based learning programmes? How much should they be involved, and what experiences do they have? How do employees manage their dual identities of student and employee when engaging in work based learning?' (p 1)

The research questions that the authors asked during the case study were:

- 'What outcomes do employers expect from the programme and to what extent do employers believe these have been attained?
- What evidence is there of these outcomes?
- What expectations do students have of the programme and to what extent are these expectations met?
- What is the evidence that these outcomes have been met?
- Where expectations and outcomes are not met what factors preventing their achievement were perceived by the student and the employer?
- Where student and employer perceptions of the programme at variance, what forms do the variances take?
- What factors in the work place most predominantly enabled students to achieve?
- What factors in the work place most predominantly prevented students abilities to achieve?' (p 6)

Description of the intervention or programme

The programme studied is the Foundation degree in Public Service Management at City University. An evaluation of the effectiveness of such programme in meeting employers' and students' aims was carried out via a questionnaire. In addition, some interviews were conducted to test out the emerging themes from the questionnaire and 'offering an opportunity to engage in a more discursive debate with employers' (p 7). The aim of the evaluation was to compare and contrast the different programme perceptions and objectives that the various parties involved in the programme held.

Summary of study – design and sample

A small scale case study of the first five cohorts of employers and their employees who had taken part in the Foundation Degree in Public Service Management at City University and City and Islington College was undertaken. Data from employers and employees was gathered via a questionnaire. The questionnaire asked both groups to identify the outcomes they wanted to achieve prior to joining the programme and those that were in fact achieved by the end of the programme. Interviews were also conducted.

57 questionnaires were sent to employers and a 35% response rate was achieved. 60 questionnaires were sent to students and the 25% response rate obtained is judged disappointing by the authors.

Data collection and analysis

'There were two questionnaires, one for employers and one for their employees, i.e. the students on the programme. Each questionnaire asked respondents to comment on how well the outcomes of the programme had been met. The outcomes were drawn from both the programme's learning outcomes, but also from the aims identified in government documentation and foundation degree benchmark' (QAA 2002).

Employers were asked to comment on how well their employees engaged with their organisation, for example as a team player, and how willing they were to take on responsibility. They were asked to specify their own involvement in the programme – for example, if they held regular meetings with their employee concerning the foundation degree, and whether they were involved in assessment of their employee in the workplace. Finally, they were asked to comment on what involvement in the programme they would find helpful – for example, having an 'employers' pack' explaining the programme, copies of assessment of their employee, and joint meetings between programme providers and employers.

The student/employee questionnaire followed the same format as for the employer, but here, students were asked to identify not only how many of the learning aims that were specified they wanted to achieve at the start and how much progress they had made, but also what other outcomes had occurred from undertaking the programme, for example, promotion, career change, more involvement and responsibility in decision making' (p 7–8).

No details were given about how the interviews were conducted.

The questionnaires had been piloted, though no details are given about this phase. In addition, no information is provided on data analysis.

Summary of results

The results of the study are presented in narrative form in the section entitled 'Outcomes and Expectations'. Findings regarding employers' and employees' expectations and outcomes of the FD are as follows:

- Employers: all employer responses but one identified that the outcomes had been achieved by their employees. Main outcomes achieved were: employees' skills had improved through the programme; employees had become more confident; employees had improved their ability to manage and communicate; employees had become more knowledgeable. Other skills that were noted as having improved were numeracy, problem-solving, writing skills, budget skills and greater awareness of policies (equality, diversity).

- Employees: The employees' perspective reinforces the findings on employers' perceptions. Employees cited rising confidence, increased knowledge, earning respect from colleagues and credibility in the organisation as outcomes of the programme. A wider awareness of public sector management, political issues, strategic planning, background and context were particularly cited.

Conclusions and weight of evidence

Authors' conclusions are expressed in the section entitled 'Challenges and Tensions' (p 12–14). The authors point to a 'polarization of experiences': some students were fully supported by their managers (given projects that are of benefit to both study and work, time off) while others felt they were the source of envy by line managers or that the employers did not give them the chance to put into practice what they have learnt. Generally the employers were not so able or interested in being fully engaged in the programme – time and work pressures being the main reasons for not engaging in learning.

Weight of evidence A:	Low trustworthiness
Weight of evidence B:	Low
Weight of evidence C:	Medium
Weight of evidence D:	Overall weight of evidence Medium

Kinman and Kinman (2000) "What's that got to do with making motor cars?" The influence of corporate culture on in-company degree programmes

Aims of the study

The aims of the study, as explicitly stated by the authors, are to explore the recent experience of in-company education of a group of managers from a major UK motor manufacturer, and to look at the difficulties participants faced as students in the light of the prevailing corporate culture. Ways for minimising these difficulties are suggested.

In particular the study tried to identify the potential adverse implications of the 'in-company' mode of delivery, to ascertain whether such model is likely to be effective in helping to provide the broader educational benefits sought by employers, and to gauge the effect of a powerful organisational culture upon the learning process.

Description of the intervention or programme

The programme analysed in this study is a degree programme delivered by the University of Luton, in partnership with the UK subsidiary of a multinational motor manufacturer, to a group of 18 middle and senior managers from the Company. 'The programme was a general business studies degree from the University's modular undergraduate programme, adapted and flavoured with specific options to meet the perceived requirements of the Company. The programme incorporated accreditation of prior experiential learning, structured, negotiated work-based learning, and formally taught components, using a 'mixed-mode' delivery model as recommended by Lewis (1986). Apart from occasional visits by participants to the university library, and residential sessions in hotels, all aspects of the programme were delivered 'in-house', using the Company's training facilities' (p 7).

Summary of study – design and sample

They study is presented in the form of a case study which aims to evaluate the programme concerned and the experiences of both participants and academic staff. Throughout the paper reference is made to transcripts of semi-structured interviews conducted with all participants. An important feature of all participants was their limited experience of higher education, but extensive experience of technical and managerial training, mostly by company personnel.

Data collection and analysis

The article provides little information on methods for data collection and analysis. One concern of the reviewers is that although the study aims to evaluate both the experiences of the course participants and of the lecturers, the quotes highlighted are all from the participants' interviews. In fact it is not clear whether academics were interviewed and how the information concerning academics was collected.

Summary of results

There is no specific section reporting on the findings. Findings can be inferred from the sections on 'Responses of Academic Staff' (p 13), 'The Effect of Company Culture on Learning' (p 14), 'The Absence of Student Culture' (p 17) and the 'Discussion' (p 18). There are no tables or graphs, only narrative.

The authors report several difficulties in delivering a degree programme 'in-company'. Lecturers felt 'at the mercy of the power of the company culture and the individuals who sustain it' (p 13). Academic staff found it very difficult to penetrate the very powerful and cohesive groups and struggled to understand their jargon and behavioural norms.

Other barriers encountered during the project were: the use of academic language in the delivery of the curriculum (academic language seen as negative, pejorative), the participants' obsession with assessment grades and achievement, their instrumental and 'surface' approach to learning (p 15–17). The absence of student culture and the fact that Company participants had no opportunity to exchange views on the course with other groups of learners compounded the insularity of the group and tended to reinforce their narrow vision. Work roles continually intruded on the course delivery (interruptions during seminars, delegation of course tasks to juniors etc) (p 18).

The article suggests that 'the benefits of in-company education of managers may be diminished if care is not taken to minimise the limiting effects of certain characteristics inherent in the physical and curricular linking of education with workplace activity... the sight of broader educational objectives is lost in the befogging influence of a powerful corporate culture' (p 19). The authors suggest that in-company delivery of learning should be integrated with some off-site activities such as week-end programmes, seminars on university premises or the use of venues in different host companies.

Having completed the degree programme, participants in the study, argued that 'in general, they have markedly improved management and decision-making skills, and are much better equipped to cope with rapid change. Participants certainly have gained in confidence, and report that they feel better able to deal with younger graduates who report to them, and peers and line managers who already have academic qualification. Most now recognise the need to break free of the introspection that pervaded the degree programme, even if they continue to find it inordinately difficult to step outside the company culture' (p 21).

Conclusion and weight of evidence

The authors conclude that 'much more could have been achieved with alternative approaches to delivery and greater recognition of any cultural pressures at the curriculum design stage (p 21).

Weight of evidence A: Low trustworthiness
Weight of evidence B: Low
Weight of evidence C: Medium
Weight of evidence D: Overall weight of evidence Medium

Leslie and Richardson (1999) Work placement in UK undergraduate programmes. Student expectations and experiences

Aims of the study – including research questions/ hypothesis

The aim of the study is both to investigate 'the expectations and experiences of students studying tourism management courses' (p. 142), as well as 'to examine and evaluate the approach to the management, and administration of student work experience (SWE) in departments offering tourism degree programmes' (p 144).

The research questions underlying the study are:

- What is the approach adopted by educational institutions to the planning, organisation and administration of the industrial experience stage?
- What are the perceptions and attitudes of students to this experience before and after the experience?
- What is the involvement and attitude of employers?

Description of the intervention or programme

The intervention studied consisted of a year-long period of supervised work experience. Students on undergraduate Tourism Management courses (some pre-work experience and some post-) in eight departments took part in a questionnaire survey. Industrial tutors also completed a questionnaire.

Summary of study – design and sample

Pre- and post-work experience students, the industrial tutors (ITs), and employers were surveyed and personal interviews were also held with employers and tutors. An initial selection of courses in tourism management was made using the UCAS handbook for undergraduate courses. In order to achieve a balanced geographical distribution and a broad selection of courses, nine courses were selected. In order to be selected a course had to have at least its first cohort of post-SWE students. The departments hosting the selected courses were then invited to participate and eight agreed. The student questionnaires were distributed and collated by the IT responsible for SWE. The ITs also returned the responses for the student and IT questionnaires to the researchers for processing.

The numbers in the sample are: 189 pre-work experience students; 106 post-work experience students; 8 industrial tutors; the number of employers is not mentioned.

Data collection and analysis

Data collection methods were interviews and self-completion questionnaire. No detail is given on the type of questionnaire used, or whether it is the same questionnaire for both groups, although some of the questions can be inferred from the article. Insufficient information is available in the text regarding data analysis as well.

Summary of results

Results relate to the 'general benefits of SWE to students, and their expectations of SWE placements' (p 144).

Preparation for SWE:

- 'an area of concern is the extent to which new placement positions have to be found each year' (p 144).

Student expectations and experiences:

- 'only 39% actually had such a [work experience] programme – and rarely in advance of commencing their placement' (p 145).
- 'notably, 72% of post-placement students indicated that they felt a defined set of objectives should have been established for their SWE' (p 146).
- 'a substantial proportion of the students (45%) did not receive a formal period of induction' (p 146).
- 'substantially fewer students received formal training' (p 146).
- 'only very rarely were opportunities provided to gain accredited NVQs' (p 147).
- 'nearly half of them considered the quality to be "adequate" or worse is a matter of concern' (p 147).
- 'there was limited development of skills in information technology, presentation and writing.'
- 'The strength of the development of skills in customer relations and oral communication serves to reinforce perceptions that the positions involved are very much oriented towards customer operations' (p 147).
- '50% of students were paid less than £126... and slightly fewer than 20% were paid more than £175. Overall this reinforces the view that students may often be exploited and employed in low-skill areas' (p 147).
- 'a cause for concern is that a quarter of them did not receive a visit (from their tutor) and less than a third received two visits during their placement of twelve months' (p 148).

General issues:

- 'the debriefing of students is limited, ranging from very little to half an hour per student plus a session in which post-SWE students give a presentation of their experience to pre-SWE students' (p 148).

Conclusion and weight of evidence

The authors conclude that 'not much real progress has been made (since an earlier study) and the processes and practices involved have changed little despite initiatives and developments in education in the intervening period relating to quality and the needs of industry' (p 148).

'The evident discrepancies between the perceptions of pre-SWE students and their actual experience indicate that the benefits anticipated by the students may often not be realised' (p 148). 'There may often also be a lack of commitment on the part of the employer' (p 148).

'Weaknesses were apparent in the design of the work-experience programmes' (p 149). 'In support of the employers, their perception that some departments have a very poor approach to liaison, and indeed to the whole process, is not justified – and this clearly has an influence on the quality of their participation' (p 149). 'Over a quarter of the employers in the survey sample did not liaise directly with the IT' (p 149). 'The limited opportunities for students to gain supervisory/ managerial experience constitute another serious weakness. This reinforces the view that many employers are more interested in what the student can do on arrival than in what he or she may be able to offer in terms of knowledge, or may be able contribute in the future. This means many employers are not realising the full benefits to themselves of SWE schemes' (p 149). 'Overall, our findings indicate that there is substantial under-achievement. SWE is failing to provide the range of experience students are hoping to gain and thus the benefits to students, and to the other partners in the process, are limited. There is an overall problem with the way in which SWE is managed' (p 149).

Weight of evidence A: Low trustworthiness
Weight of evidence B: Low
Weight of evidence C: Medium
Weight of evidence D: Overall weight of evidence Medium

The Quality Assurance Agency for Higher Education (2005) Report of a survey to follow up Foundation Degree reviews carried out in 2002–2003

Aims of the study – including research questions/ hypothesis

This is a survey to find out how the 34 Foundation Degrees have developed since they were first surveyed in 2002–03. In particular the survey aims to:

- 'identify developments and changes since the reviews
- analyse student achievement
- identify areas for FD development
- identify good practice and innovation
- identify developing practice in work-based learning (WBL)
- consider the integration of academic studies and WBL
- make recommendations for the future development of FDs.' (p. 3)

The key questions used as the framework for the review are:

- What is the educational context (including consortia) of the programmes under review, how have the programmes evolved and what level of employer engagement has there been?
- How are the programmes operating (aims and intended learning outcomes, learning and teaching, assessment and student support arrangements)?
- What issues are emerging with regard to student recruitment and achievement?
- What learning resources are being used?

Description of the intervention or programme

Foundation Degrees are a new HE award at intermediate level that links work-based learning and academic studies. They were set up in 2001.

Summary of study – design and sample

The study comprised a survey of the 34 FDs reviewed in 2002–03 using a self-completed questionnaire; analysis of 2002–03 review reports and student data; and a discussion group comprising representatives of consortium, employers and students.

Data collection and analysis

Variables on which data was collected were:

- developments and changes since the reviews
- student achievement
- areas for FD development
- good practice and innovation
- developing practice in work-based learning (WBL)
- the integration of academic studies and WBL (p 3)

Very little information on data analysis is provided or can be inferred.

Summary of results

In some reviews students had reported that they had not previously considered taking a HE qualification, but the close relationship between their employment and a particular programme had encouraged them to enrol.

'FD students benefit greatly from working with employers. Ways in which employers contribute effectively to programmes include:

- the preparation of assignments based on live projects
- the provision of formative assessment and feedback on such assignments
- the demonstration of work-related skills
- the application of theory in practice
- maintaining the currency of the curriculum
- assisting with staff development' (p 10)

'The effective FD schemes found in the review and the survey all involve a significant element of practical application and real or realistic projects. In the best examples, providers:

- define the rationale and arrangements for WBL and its support in the programme specification and related documents
- describe the rationale, arrangements for WBL and its support appropriately in the student handbook and staff guidance
- provide opportunities for employers to meet each other and programme staff to clarify the aims and ILOs of the FD and the purposes of WBL
- employ an administrator to organise the WBL
- provide written guidance and face-to-face briefing for employers and/or mentors
- draw up a three-way agreement of the respective responsibilities of the academic provider, workplace mentor and/or employer, and student to ensure that all three parties fully understand their respective roles and what is to be achieved through WBL.' (p 18)

'For full-time students, when major employers are involved and there are industry standards and/or qualifications, effective WBL occurs with the cooperation of the employment sector. This is particularly clear in programmes in education, health and social care, aircraft engineering and ophthalmics that demonstrate such arrangements.

The situation is more varied when the employers are SMEs. Cooperation between FD providers and SMEs can often be very effective, although more time consuming for delivering institutions as they have to spend more time maintaining effective communication with a large number of employers. In such cases, both small and large employers often define a project for the student to undertake in the workplace. The survey shows that, currently, this works particularly well in subjects such as engineering, the creative arts and pre-school childcare.' (p. 19)

'Examples of good practice which contribute towards achievement of the WBL ILOs include:

- the realism of the activities
- the extent to which students have to manage their own learning and bring their academic learning and key skills to bear on the WBL activity
- the use of industry-standard equipment
- the use of employer-designed projects and case-studies
- the input of employer comment and feedback
- where appropriate, employer input to aspects of assessment, such as formative feedback on projects or presentations
- the use of real-work environments within the consortium, such as college travel agencies
- the imaginative contribution of employers
- presentation by students to the employer about the project set by the employer' (p 19)

'Since the reviews, programme teams have developed ways of involving employers more actively in evaluating student performance. Examples of good practice include:

- encouragement to employers to give formal feedback to students on their key skills
- use of a standard form prompting employers to give a qualitative assessment of students' abilities and skills in WBL
- using a standard report for tutors to provide formative feedback and a summative judgement, and another similar standard report for employers to identify whether WBL has been completed satisfactorily
- practice trainers are increasingly involved in the moderation of academic work and the writing of unit competencies in a care programme
- contributing to the assessment of student presentations' (p 21)

'The reviews and survey show that students benefit most from the involvement of employers when:

- employers are widely consulted about the viability of a programme for their employment sector at the planning stage
- a small representative group of employers is involved in the design and initial validation of a programme, and that this includes strategies for achieving and assessing the ILOs and delivering the WBL parts of the programme
- employers are involved in the regular monitoring and enhancement of programmes
- employers are involved in specifying the outcomes for, and the supervision of, periods in work
- employers are involved in the design and marking of assignments, and the delivery of the programme
- documents for employers set out clearly the information for the programme avoiding unnecessary educational terms
- three-way agreements which specify clearly what is to be achieved are signed between the provider, the employers and the student for all periods in WBL
- WBL mentors work with the academic tutor in imaginative and flexible ways
- effective liaison is maintained between employers and the academic team (p 22)

Conclusion and weight of evidence

'The majority of providers have established effective working relationships with employers... Employers are willing to be involved in the design of the programmes but many find the necessary continued involvement more difficult... There are particular challenges for providers working with small and medium-sized enterprises (SMEs) but, on a number of programmes, students benefit from the involvement of such employers' (p 1).

Weight of evidence A: Low trustworthiness
Weight of evidence B: Low
Weight of evidence C: Low
Weight of evidence D: Overall weight of evidence Low

Thomas and Busby (2003) Do industry collaborative projects enhance students' learning?

Aims of the study

The aims of the study are to explore how live projects can be used in the teaching of undergraduate programmes. In particular the authors investigate 'expectations and perceptions of industry partners, tutors and students involved in a live project experience at Birmingham College of Food, Tourism and Creative Studies' (p 226).

Description of the intervention or programme

The aims of the 'live projects' were to give students the opportunity to work with 'real life'. The authors give a brief overview of life projects stating that: 'Live projects are formed from an industry-education partnership, each industry partner writes a brief, setting the parameters to an investigative situation. This allows the students to devise specific objectives relating to the situation as well as to design and undertake the research process. At the beginning of the live project the students elect a group leader along with a number of other nominated roles to ensure clarity, distribution and completion. Within each subject units there are generic learning outcomes' (p 227). The industry representatives give the verbal brief and the tutors facilitate the running of the live projects.

Summary of study – design and sample

Primary data was collected from three sources. First, 256 questionnaires were administered to all second-year degree and higher national diploma students who had just participated and completed a live project. The questionnaires were distributed to students at the end of a lecture, yielding 141 usable questionnaires, a response rate of 55%. In addition, a focus group of eight tutors, and in-depth semi structured interviews with three different industry partners were undertaken.

Data collection and analysis

For students questionnaires 'the majority of questions were open, often asking the students to prioritise their answers in order of importance and offering reasons for their choice. This style of question enabled a descriptive answer to be given, which, in turn, was coded, categories formed and sorted to allow for comparison against other student groups. Two rating scale questions were used to establish the perceived usefulness of the live project and the perceived value of the acquired skills to employers. These rating scale questions enabled a student to quantify their experience and perceived value. The ratings were processed to achieve a mean score and then incorporated into the sorting and comparative process, along with the other student data' (p 228–229).

'Both the focus group and in-depth interviews were audio-taped and transcribed. The analysis of the focus group and in-depth interviews utilized a process of open coding, category formation and sorting to elicit patterns of concepts, where clusters of similarity and differences were easily discerned' (p 229).

Summary of results

The results of the study are clearly presented in the Results section (p 229, and subsequently summarised in Table 1). More general conclusions are drawn on page 234.

'Free consultancy, improved public relations, fresh approach to problem solving and realistic recommendations were considered to be the overall benefits of live projects by industry partners. They reported that they often incorporate the findings from live projects into their management meetings, where amendments to marketing strategies and/or product development often arise. The students' work is often valued by industry because the findings support current business thinking and reflect the dynamic environment of the marketplace.

'From the tutors' perspective, there are several aspects that have added value to the live project experience. First, they synergistically experience the benefits of working together as a team. (...) Furthermore, tutors have been able to derive valuable insights to an organisation; information gathered from site visits and from speaking with managers and staff have provided tutors with pertinent industrial examples for lectures, as well as a basis for case-study development. From developing relationships with these organisations, further benefits have materialised, such as guest speakers and opportunities for further research and consultancy. Finally, there is the added value of positive publicity for the college.

'The majority of students reported that they have enjoyed participating in a live project and felt that they have gained new skills as well as further developing existing skills and personal attributes. In particular, the students highlighted the enhancement of:

- IT;
- communication;
- time management;
- organisation;
- presentation; and
- research skills.

'(...) Interestingly, all students perceived that the skills they developed through the live project experience were of great value to future employers (...) .

'(...) The teamwork and production of results were considered to be most rewarding experiences of the project, with particular emphasis on the "social and emotional togetherness" of being part of a group working towards a common goal that industry valued.' (p 233–234)

Conclusion and weight of evidence

The authors conclude that live projects provide a valuable experience for all parties: industry partners find potential solutions to existing problems in the fresh ideas put forward by students; students learn new skills; and tutors have the opportunity to keep up-to-date and make new or strengthen old partnerships with industry. Authors, however, also point out that, 'from this study it is difficult to prove that students have made the transition from dependent to independent learning' (p 234). Reasons for this are the rather constrained environment of the live project and the large size of students' groups. 'Despite the challenges of working in relatively large groups, the students generally found the live project experience of value, enjoyable and interesting, an opportunity to share ideas and meet other students within their year' (p 235).

Weight of evidence A:	Low trustworthiness
Weight of evidence B:	Low
Weight of evidence C:	Medium
Weight of evidence D:	Overall weight of evidence Medium

Thomas and Grimes (2003) Evaluating the integration of key skills and NVQs into an undergraduate degree programme: a case study from the graduate apprenticeship initiative

Aims of the study

The article evaluates a pilot graduate apprenticeship in hospitality management offered at Birmingham College of Food, Tourism and Creative Studies (BCFTCS).

The main research questions that can be inferred from the article are:

- What are the key outcomes to emerge from an evaluation of the design and implementation of the first year of delivering the graduate apprenticeship programme to people in employment who complete the taught elements of the course on a part time basis?
- What is the process of integrating key skills and NVQs into an existing programme?
- What is the added value to the student learning experience?
- What are the main benefits and challenges arising from a programme involving a coalescence of key skills, HE awards and NVQs from the students, employers and institutional perspectives?

Description of the intervention or programme

The pilot graduate apprenticeship is 'a structured training and development plan for existing

hospitality employees' (p 384). It consists in completing key skills and NVQs units alongside degree modules. Key skills units are completed during the first year; four NVQ units which require students to engage in work-based activities are completed during the summer and in the second year.

Summary of study – design and sample

The study aimed to examine how well key skills/ NVQs integrate with HE study and the extent to which integration provides added value to the student learning experience. The views of students, employers and course managers on the benefits and challenges of participating in an apprenticeship programme at BCFTCS are examined.

Data collection methods consisted of: a self-completion questionnaire for students; semi structured interviews with employers held in the workplace; and meetings and interviews with graduate apprenticeship programme managers.

The sample consisted in the pilot cohort of seven students; but the number of student employers and programme managers involved is unknown.

Data collection and analysis

Student questionnaires were designed to collect qualitative and quantitative data from students mid-way through the academic year and at the end. The questionnaires assessed 'multiple issues including student views on the coalescence of key skill/NVQ and HE award, their perceived level of learning and skill development and their perceptions of the programme including any difficulties they encountered' (p 385).

'The students were given a 17-point list detailing a range of key transferable skills and personal attributes. The list was broadly sub-divided into the categories of:

- Personal self-reliance skills (time management skills, team work skills, planning/organisation, the skill of managing own learning, and task prioritisation).
- Communicative skills (writing skills and verbal communication skills).
- Problem solving skills (numeracy, analytical skills, IT skills, research skills).
- Personal attributes (self-discipline, self-esteem and level of self confidence).
- Key work-related skills (managerial skills and customer service skills).

'With the use of a four-point Likert scale (1=no improvement, 2=slight improvement, 3=improvement, 4=substantial improvement) the students were requested to rate the extent to which they thought participation in the graduate apprenticeship had helped them to improve in each of these areas. Following this task, the students were asked to identify which elements of the graduate apprenticeship they felt had contributed the most to the areas in which they had improved. Where students reported no improvement, they were asked to stipulate reasons as to why they thought this was the case' (p 385–386).

No details are provided on how the data obtained from employers and programme managers is analysed.

Summary of results

Results are presented in narrative form, in the section entitled Evaluation of findings and discussion (p 385–389) and then summarised in the Conclusion (p 389–391).

From the point of view of students 'the graduate apprenticeship in Hospitality Management offers a significant and worthwhile learning experience. The students appear to appreciate how the developmental work of key skill units provides for improvements in a range of personal skills, problem solving skills and communicative skills although students value certain key skill units over others (namely Problem Solving, Communication and Improving and Managing Own Learning over Information Technology and Application of Number)'.

'In general the students feel that the incorporation of NVQs into the graduate apprenticeship programme has added significant value to their learning experience. In the main, the units are helping students to increase their overall skill portfolio, gain formal recognition of competency in a range of key work related skills, gain confidence in management skills and in some instances gain new positions of responsibility in their organisations' (p 390).

'The main challenge for the graduate apprenticeship students appears to be workload' (p 390).

'From the employer's point of view it is recognised that the personal commitment and familial sacrifices made by their employees in undertaking the graduate apprenticeship was not insignificant' (p 390).

'Each of the employers who participated in the research felt that the fusion of key skills, NVQs and degree qualification added value to the programme, as it produced a programme of study with greater work relevance' (p 390).

'Each employer identified the core skills developed through key skill units as the skills that they valued the most in managerial staff' (p 390).

'All of the employers who participated in the

research saw the graduate apprenticeship as a valuable route to enhancing the personal and professional development of their employee. They recognised that any additional staffing costs incurred through participation in the graduate apprenticeship were counteracted by long-term gains in terms of the continuing professional development of a key member of the management team' (p 390).

'From the programme team perspective, delivering the graduate apprenticeship has proved a complex and multi-faceted activity. The two main challenges were: the need to re-write the NVQ unit specifications into a simpler format and secondly, the need to synchronise the different delivery, assessment and verification regimes of the separate programme components' (p 390).

'Despite these difficulties, a number of learning opportunities were presented through this integrated programme format, for example, greater interactivity between theory and practice and the ability to adopt reflexivity in the learning process. In view of these learning opportunities apprentices have been able to develop the prepositional, procedural and dispositional knowledge and use this knowledge to inform academic learning and produce informed discussion in seminars. The result has been high performance by all apprentices across the programme's different elements'. (Abridged from the conclusion section, p 389–391)

Conclusion and weight of evidence

'There is a need for employers to contribute to the creation and management of the learning environment. It is essential that all "actors" in the relationship develop a reciprocal approach in order to achieve the goals desired by students, industry and education. With guidance and support from their tutors and employers, the students appeared to manage the demanding workload and recognise both the implicit and extrinsic benefits of completing a programme that integrates skills based training and work based learning into academic study' (p 390).

For HEIs looking to devise a similar programme, it is suggested that major consideration is given to the sequence in which programme components are delivered. 'At BCFTCS both students and staff could see the value in completing as much of the key skill work as possible at the beginning of the programme, whilst delaying the introduction of NVQ until after a substantial amount of degree had been completed. By sequencing delivery in this way the programme managers felt that a "continual improvement loop" had been facilitated, whereby the developmental work of the key skill units helped the students to improve academic performance, whilst the knowledge acquired through academic learning enabled them to improve their understanding of the operational issues featured in the NVQ units' (p 390).

Weight of evidence A: Low trustworthiness
Weight of evidence B: Low
Weight of evidence C: Medium
Weight of evidence D: Overall weight of evidence Medium

York Consulting (2004) Evaluation of Foundation Degrees final report

Aims of the study – including research questions/ hypothesis

The broad aims of the study are to provide an early insight into Foundation Degrees activities to inform policy. The study aimed to answer the following questions:

- What is current nature and range of Foundation Degrees?
- What are the characteristics and attitudes of current FD students?
- To which extent the FD activities that have been developed and are being delivered are contributing to the achievement of the foundation degree objectives?

Description of the intervention or programme

The focus of the intervention was the Foundation Degree, which is characterised by the following key features:

- 'employer involvement in the design and review of programmes;
- the development of skills and knowledge:
  - work specific skills relevant to a sector;
  - underpinned by academic learning;
  - key skills development;
  - generic skills development;
  - underpinned by a personal development plan, recorded and validated by the awarding university;
- application of skills to the workplace;
- progression within work and/or to a honours degree.' (p 2)

Summary of study – design and sample

The study methods comprised of initial mapping (review of UCAS, HESES, HESA and ILR datasets), student survey (short, self completion questionnaire), case studies of 15 institutions (this involved interviews with senior staff, programme leaders/course directors; FD students and lecturers, tutors). It is worth noting that no employers were

surveyed.

The sample comprised full- and part-time Foundation Degree students, senior managers with a strategic role in the development of Foundation Degrees in higher education institutions and Further Education Colleges, lecturers and tutors, programme leaders, course directors. It is estimated that the student questionnaire was distributed to 4,000 students. 841 useable questionnaires were returned (21% response rate). In addition a total of 68 interviews were held across all case studies in 15 institutions.

Data collection and analysis

For what concerns the student survey, a short self-completion questionnaire, designed to take around 10 minutes to complete, was developed and agreed with the DfES steering group. Two methods of questionnaire completion were provided: a paper-based questionnaire with reply paid envelope and introductory letter; a web-based online questionnaire supported by a 'flier', issued by email or hard copy, which indicated the location of the website (using the same questions and format as the paper-based questionnaire) (p 4).

No further detail on the interviews is provided and insufficient information on data analysis is provided to make a judgement on its soundness.

Summary of results

'The main benefit of the work-based learning element of the Foundation Degree as perceived by students is that it enables students to put in to practice what they have learnt in the classroom' (p 32).

'Whilst recognising the benefits, some institutions point to the nature of the student group as a barrier to carrying out work-based learning. This includes those students who are using the Foundation Degree as a basis to change career' (p 32).

'Student perceptions on the problems associated with work-based learning are focused on 3 key themes.

- difficulty of actually organising a placement to enable work-based learning to be carried out and the lack of support from the institution
- not enough work-based learning as part of their Foundation Degree
- the work-based learning they have experienced has little, or limited relevance to either the subject of their Foundation Degree course or to their employment' (p 33–34)

'Nearly three-quarters of students are in agreement (73%) that they have shaped their own learning throughout their Foundation Degree' (p 37).

'The vast majority of Foundation Degrees have effectively involved employers and employer-related organisations to some extent. However, the level and manner of employer engagement is varied' (p 44).

It is 'it easier to engage employers because of the nature of the subject matter' (p 44).

'There is evidence of good practice in engaging employers through employer networks, public sector bodies and stakeholder groups, rather than approaching individual employers' (p 44).

Barriers to engaging employers fall into three categories:

- 'a general lack of interest from employers;
- employers having a lack of understanding of what the Foundation Degree is and the potential benefits to the organisation;
- difficulty in engaging small firms employing limited numbers of people' (p 45).

The more 'custom built' foundation degrees are for employers, the greater the employer involvement in the design (p 47).

'There is evidence of concern from students of the level of understanding that their employer has of their Foundation Degree. However, there are students who question how the Foundation Degree is perceived by employers and their level of understanding and how it will impact on future career prospects' (p 49).

Conclusion and weight of evidence

'Key stakeholders and partners are involved in programme design and development to some extent. Employer involvement is mixed.' (p 59)

'Employer engagement is often more effective when this takes place through employer networks, public sector bodies and stakeholder groups, rather than approaching individual employers. Employer involvement is more effective when it can be tailored to the individual sector/Foundation Degree course. It is essential that employers are involved in the design, development delivery and regular review of Foundation Degree programmes. Employer involvement in student assessment procedures is an area that could also be improved.' (p 60)

Weight of evidence A:	Low trustworthiness
Weight of evidence B:	Low
Weight of evidence C:	Low
Weight of evidence D:	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/**

First produced in 2008 by:

Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre)
Social Science Research Unit
Institute of Education, University of London
18 Woburn Square
London WC1H 0NR

Tel: +44 (0)20 7612 6367

http://eppi.ioe.ac.uk/
http://www.ioe.ac.uk/ssru/

The **Evidence for Policy and Practice Information and Co-ordinating Centre** (EPPI-Centre) is part of the Social Science Research Unit (SSRU), Institute of Education, University of London.

The EPPI-Centre was established in 1993 to address the need for a systematic approach to the organisation and review of evidence-based work on social interventions. The work and publications of the Centre engage health and education policy makers, practitioners and service users in discussions about how researchers can make their work more relevant and how to use research findings.

Founded in 1990, the Social Science Research Unit (SSRU) is based at the Institute of Education, University of London. Our mission is to engage in and otherwise promote rigorous, ethical and participative social research as well as to support evidence-informed public policy and practice across a range of domains including education, health and welfare, guided by a concern for human rights, social justice and the development of human potential.

This document is available in a range of accessible formats including large print. Please contact the Institute of Education for assistance:

telephone: +44 (0)20 7947 9556 email: info@ioe.ac.uk