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Exploring the Teaching-research Nexus in College Based and University Higher Education

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Exploring the Teaching-research Nexus in College Based and University Higher Education

By

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NB. Figures and tables presented in green represent illustrations of other's research, whereas those presented in blue reflect findings from this thesis.

Author's declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Sub-Committee.

Work submitted for this research degree at Plymouth University has not formed part of any other degree either at Plymouth University or at another establishment.

Relevant scientific conferences were regularly attended at which work was often presented and several papers prepared for publication.

Publications

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ABSTRACT

Cathy Ann Schofield

Exploring the Teaching-research Nexus in College Based and University Higher Education

In traditional university higher education the normal expectation is that academic staff will undertake teaching and research. There is an implicit assumption that active researchers provide a high quality learning experience, with research-informed teaching at its core. The research presented in this thesis explores aspects of the teaching-research nexus in university and college-based higher education. As there is not traditionally a research culture within college-based higher education it may be assumed that the learning experience may be of a lesser quality.

This research considered four aspects of provision. It considered institutional and lecturer views on the nexus before examining what students experienced and how engaged they were in their lecturers' research. Comparisons between the types of institution showed an expected cultural pattern between universities and colleges stance on the nexus, where CBHE focused on teaching, post-1992 universities on research-informed teaching, and the pre-1992 universities highlighting their research reputations. The student experience is shown to diverge from this pattern. The CBHE psychology students had a more research-rich experience than those at universities, with varying levels of engagement with lecturers' research.

The evidence form this study suggests that research, in its traditional form, may not be necessary to enhance learning. It indicates that there needs to be further exploration about the role of scholarship within higher education to develop a better understanding of the role of CBHE in the higher education sector, and what it may contribute to the teaching-research nexus. This may have implications for the status of CBHE in the higher education landscape, as has been suggested by the first TEF outcomes.

CONTENTS

LIST OF FIGURES

LIST OF TABLES

List of Abbreviations

BIS	Department for Business, Innovation and Skills
CBHE	college-based higher education
DfEE	Department for Education and Employment
DfES	Department for Education and Skills
Fd	Foundation degree
FdA	Foundation Degree (Arts)
FdSc	Foundation Degree (Science)
FE	further education
FEC	further education college
HE	higher education
HEA	Higher Education Academy
HEFCE	Higher Education Funding Council for England
HEI	Higher education institution
HESA	Higher Education Statistics Agency
HND	Higher National Diploma
NCIHE	National Committee of Inquiry into Higher Education
QAA	Quality Assurance Agency
REF	Research Excellence Framework
TEF	Teaching Excellence Framework
TRS	Teaching and Research Survey
UKCISA	UK Council for International Student Affairs

Chapter 1

Introduction

1.1 Rationale

The teaching-research nexus can be defined as the relationship between any research or dissemination activity undertaken by academic staff and students either individually or collaboratively, and the links with the students' learning experience (Elton, 2001; Healey, 2000). As a concept it is fundamental to understanding how higher education (HE) is provided, while being widely adopted, contended and critiqued (Brew & Boud, 1995; Hattie & Marsh, 1996; Trowler & Wareham, 2007). It is reinforced by the underpinning notion that the role of academics in universities is to undertake teaching and research in pursuit of the institutions' mission, placing the nexus at the core of higher education delivery.

The teaching-research nexus can be traced back to Neumann (1992), who was the first person to articulate a theoretical basis for the relationship between these two functions. In the nexus it is the teaching and research contributions made by the individual academics, and through departmental activities, that combine to enhance students' skills and attitudes. The nexus provides the conceptual location for learning. The teaching-research nexus intrinsically is seen to support the belief that there is a dynamic relationship between teaching quality and research productivity (Griffiths, 2004), but this remains contentious. In the twenty-five years since the first discussions of the nexus, two schools of thought have emerged positing that either there are inextricable links between teaching and research (Brew & Boud, 1995; Elton,

1986, 2001; Jenkins, Blackman, Lindsay, & Paton-Saltzberg, 1998; Rowland, 1996), or that they are two co-existing facets of the role of academics in higher education (Centra, 1983; Feldman, 1987; Hattie & Marsh, 1996; Ramsden & Moses, 1992).

For many university academics the two main aspects of their role, teaching and research, complement each other asymmetrically; research enhances teaching, and to a lesser degree teaching enhances research (Hattie & Marsh, 1996). However, this is a contentious premise due to limited supporting evidence and a lack of theoretical explanation as to why this should be so (Zaman, 2004). The teaching-research nexus is experienced by students through *research-informed teaching* delivered by their teachers. Research-informed teaching is also variously defined within the literature (Deem, 2006), and sometimes, confusingly used synonymously with teaching-research nexus, as will be discussed in more detail in Chapter 6. For the purpose of this thesis, research-informed teaching is defined as teaching that uses any research findings to support points of theory, application or policy, or utilises research processes, or examines the benefits and limitations of research methods within the classroom context (Brew, 2006b), whereas the teaching-research nexus embraces the wider construct and activity across levels of learning.

One difficulty with research in this area is the nebulous nature of some of the concepts and the fuzzy boundaries between the types of institutions where the research activity is undertaken. Where definitions, such as research-informed teaching, remain contentious or easily misunderstood, the impact of various interpretations will be discussed in context of the relevant chapters.

1.2 The Institutional Context

Research that has defined, discussed and evaluated the teaching-research nexus and the role of research-informed teaching in curriculum has been undertaken by academics working in the traditional university sector, characterised by teaching at undergraduate, masters and doctoral

level. However, not all HE is delivered in these traditional settings, and staff and student opportunities to engage with research varies considerably.

For the purpose of this research the higher education sector is considered to be divided into three categories but conspicuously ignores the emerging fourth, private provider, sector. The nexus is explored in the English *pre-1992 university sector,* the *post-1992 university sector* and the *college based higher education (CBHE)* sector. The pre-1992 group includes higher education institutions (HEIs) with considerable heritage. Students follow higher education programmes leading to qualifications, or credits which can be counted towards qualifications, which are above the standard of GCE A-levels or other Level 3 qualifications. They generally provide undergraduate and postgraduate degree courses and research degrees. Pre-degree courses, such as those leading to HNCs or HNDs may also be offered (HEFCE, 2015b). Post-1992 universities have similar powers to award degrees at undergraduate and research levels and many have done so for long periods, but they are arguably less rooted in a research tradition.

Although all UK universities offer HE, not all HE is delivered through universities. There has been a long history of HE offered through technical, teacher training and further education colleges. The Further Education sector provides "education that is suitable to the requirements of persons who are over compulsory school age….except that it does not include…higher education" (Education Act, 1996). This definition focuses more on what further education is *not*, rather than what it *is*. Helena Kennedy QC, as Chairman of the Further Education Funding Council, defines further education within her policy document as "everything that does not happen in schools or universities" (Kennedy, 1997, p. 1). This suggests further education is a level of qualification and its role is to educate those that have completed compulsory education but are not yet studying for a higher education qualification. Both of these claims need nuancing because key stage 4 pupils have been attending further education colleges (FECs) as part of the Increased Flexibility Programme since the early 2000s (McCrone, Wade, & Golden, 2007), and FECs have been offering elements of HE since the 1944 Education Act

(Hyland & Merrill, 2003). This provision was regularly referred to as Higher Education in Further Education (HE in FE). However, in the past three years *College based higher education* has emerged as the preferred terminology. It is used where higher education is provided in further education colleges in partnership with universities. It refers more explicitly to the level of qualification *and* place of study (Healey, Jenkins, & Lea, 2014), although different organisations use the terms interchangeably (for example: HEFCE; Mixed Economy Group and Association of Colleges). For this study the term CBHE is adopted throughout.

The institutions taking part were selected to be typical of their type in maturity and breadth of provision. In addition to their longevity it should also be noted that these representative groups have different governance structures. English universities are legislated by the Higher Education Funding Council for England (HEFCE), with quality review by the QAA. CBHE institutions are legislated in different ways, with different policy, funding and procedural factors affecting provision involving OfSTED, QAA and oversight from their University partners. CBHE institutions providing HE courses in partnership with universities who hold the relevant undergraduate and postgraduate degree-awarding powers are subject to QAA institutional review.

If we accept that research and teaching are inextricably linked then it may be argued that institutions that do not encourage a research culture are disadvantaging their students. Higher education providers have traditions and reputations built on their teaching and research excellence, demonstrating the teaching-research nexus in different ways, and they employ staff with different contractual expectations. As English CBHE and alternative providers are not governed by the same requirements to undertake research, therefore it is relevant to ask whether the potential lack of an active and explicit research culture negatively impacts on the students' experience.

As I have developed and taught HE programmes in a college of further education for twenty years I am aware of these differences in research cultures. Lecturers employed at

further education colleges do not traditionally undertake research, although I have been one of the few lecturers within my institution to be successful in receiving a number of grants for various research projects leading to my current research and teaching contract. Despite my experience is that I do not feel more equipped to teach HE courses since undertaking the role of researcher. Indeed, the research role has, at times, acted as a distraction to my lecturing role by adding to my workload in an unpredictable way, and physically removing me from the classroom to attend conferences and collect data. In balance, I acknowledge that my research activity has enabled me to learn about many facets of data collection. This greater awareness has benefitted my students in the classroom when undertaking their own research projects.

At my own institution, permission to offer Level 6 provision has been conditional on the college demonstrating a research profile, further emphasising the importance that universities place on the nexus. This research activity being regarded as a good in its own right. Explanations as to how the research-activity of one or two lecturers per degree enhances the students' experience has not been offered. Neither is credit given for college staff's teaching qualifications, which is a professional requirement of those working in further education colleges. Logic might suggest that those trained to teach may offer a better learning experience than those who are trained to research, and who are possibly distracted by the pressure to disseminate. On the basis of my personal experiences the initial driver behind this research was to establish whether it is indeed necessary to be research-active in order to provide students with research-informed teaching and meaningful learning experiences.

1.3 Aim

The aim of this study is to explore how the teaching-research nexus is articulated in practice and activity in different types of HE, comparing across the sectors to include provision in CBHE as this has not been considered so far in the teaching-research nexus and research informed teaching literature.

The potential scope and scale for this research is enormous, and inevitably choices had to be made to capture information. Differences in the operation of the teaching-research nexus relationship may be affected by structural and procedural phenomena at an international, national or local level, and at all scales from the individual to the institution (Figure 1.1). Internationally the impact may be through issues relating to reputation and commerce in the global knowledge economy. Nationally there are variations driven by the different funding, policy directives and the regular evaluation of research quality and output, known as the Research Excellence Framework (REF), and the assessment of teaching quality through the Teaching Excellence Framework (TEF). Based on these drivers the thesis aims to examine whether there are differences reported across the HE sector in describing and promoting institutions' main missions: teaching and research. These forces may differently impact on the institutions' stances on research and teaching. Such stances may become evident in how they promote their mission through marketing to prospective undergraduate students.

The institutional representations, as suggested in marketing materials, may be translated into the working ethos through the departmental distribution of workload, contract type and expectations with respect to teaching and research activity. These stances would therefore be experienced by the lecturers. The lecturer creates the direct nexus experience where they may use research to inform or enhance the learning experience, but consideration needs to be given to what impact the institutional mission has on the resultant teaching.

It is posited that the teaching-research nexus is seen by academics, and HE managers, as vital to the student experience, but to what extent do students perceive the nexus as important to their education? The research has focused here on capturing the student perspective on and experiences of the nexus. It seeks to capture the student's perspectives on the inclusion of research into their teaching and learning domain.

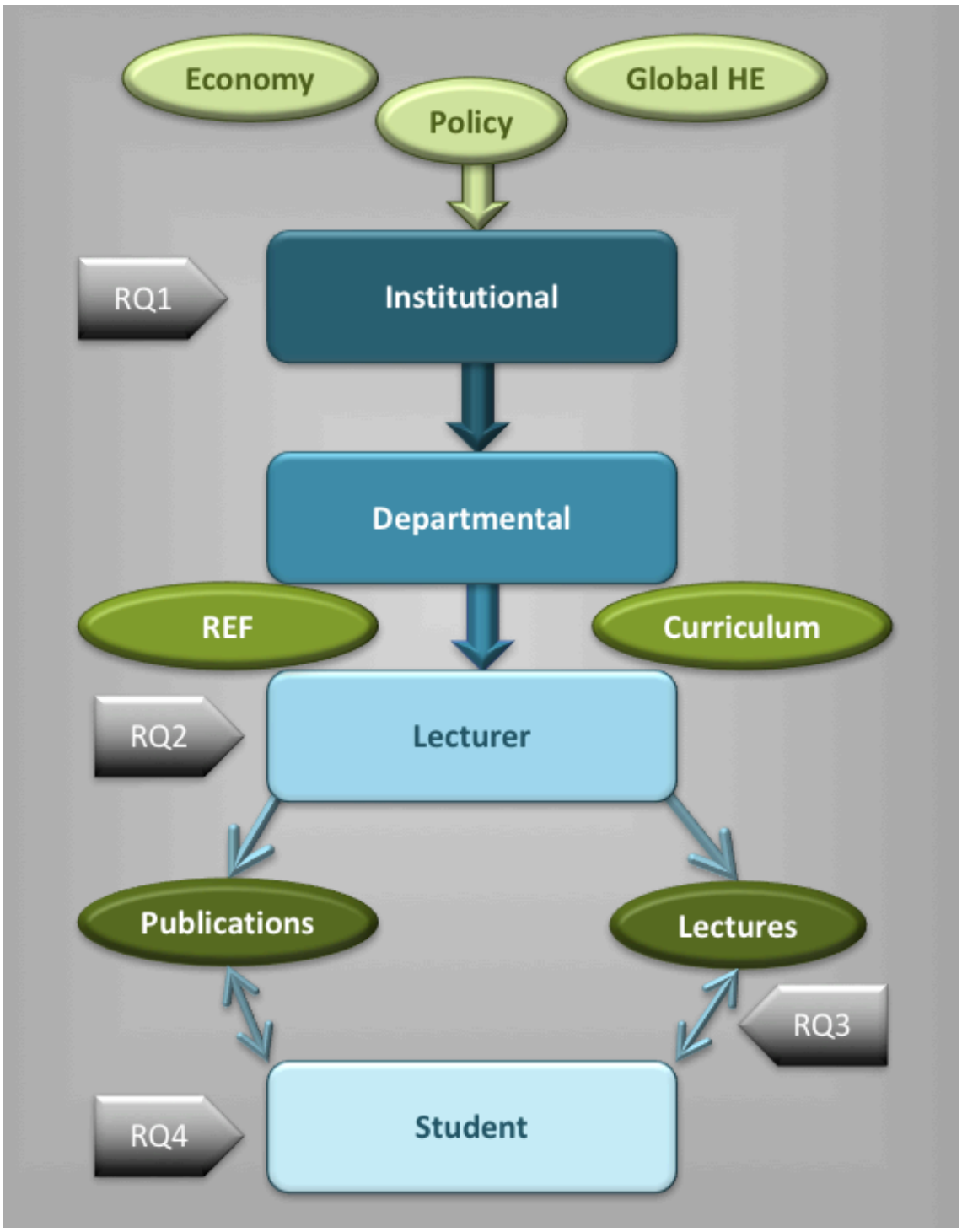

Figure 1.1 Concepts of scale and their relationship to the research questions

In approaching the topic it was recognised that the potential scope for data collection and analysis was enormous. The thesis therefore takes a pragmatic mixed methodological approach (Chapter 3). The question of institutional missions was explored through analysis of published marketing material from nineteen institutions – representing data as might be experienced by prospective students (Chapter 4). The interpretation of the institutional

mission was examined through a survey of 138 lecturers from 60 institutions, considering their role, contractual requirements and research behaviour (Chapter 5). How research was experienced by students was examined through an observational method, where data were collected from two CBHE and two post-1992 universities, based on one week of level 5 psychology provision (Chapter 6). The students' perception of the role of research within the learning experiences was established through twelve focus groups incorporating the responses of forty undergraduate students (Chapter 7). Although data sets were not extensive, as far as possible the research sought to balance information from the three sectors, pre-1992, post-1992 institutions and CBHE data to explore the diversity of the sector. The methods used may provide a platform upon which further research can be built.

While there is a relatively mature literature and case examples of the research-informed teaching and experience of the teaching-research nexus in HE, there is limited research evidence exploring the CBHE context. This study considers four aspects of provision aiming to capture commonalities and differences across the three sectors through four discreet research questions.

1.4 Research Questions

The research questions this thesis explored are:

RQ1 To what extent do differences exist between the marketing of teaching and research in different types of HE institution?

RQ2 To what extent do lecturers' individual beliefs and behaviours reflect differences identified at an institutional level?

RQ3 To what extent does the research undertaken by lecturers in different institution types relate to teaching practice?

RQ4 To what extent do students at different institution types perceive and experience lecturers' research differently?

How each of these research questions will be approached within the structure of this thesis is demonstrated in Table 1.1.

Chapter	Purpose	Research question
1	Introduces the context of the research offering a rationale, aims and research questions.	
2	Considers the theoretical underpinning of the teaching-research nexus in more detail, providing the setting for the research questions.	
3	Offers a rationale for the methodological approaches, describing the processes of data collection and analysis.	
4	Examines the value that educational institutions may place on the teaching-research nexus through the institutional identity presented to prospective students via their marketing stance.	RQ1. To what extent do differences exist between the marketing of teaching and research in different types of HE institution?
5	Assesses whether the case presented to the public corresponds with lecturers' teaching and research activity through self-reporting of academic staff at a range of institutions offering higher education. Subsequent analysis of publication behaviour is used to triangulate the survey responses.	RQ2. To what extent do lecturers' individual beliefs and behaviours reflect differences identified at an institutional level?
6	Examines the learning experience through classroom observations, in order to establish whether any noted differences in research activity relate to the student experience.	RQ3. To what extent does the research undertaken by lecturers in different institution types relate to teaching practice?
7	Reports on students' awareness and experiences of their lecturers' research activity and whether they believe research is important in their education.	RQ4. To what extent do students at different institution types perceive and experience lecturers' research differently?
8	Discusses the findings and offers recommendations and conclusions.	

Table 1.1 Structure of the thesis

Chapter 2

Higher Education and the Teaching-Research Nexus

2.1 Introduction

The teaching-research nexus is a contentious and complex concept. It is complex because no empirical explanations have been given for its function, making definitions problematic. It is contentious as there are several schools of thought about its existence. This chapter aims to capture the complexity by reviewing the extant literature relating to scholarship with a focus on the scholarship of discovery and teaching as those that form the nexus. Models of the teaching-research nexus are examined and the factors that affect the relationship at a range of levels will be critically assessed. The chapter concludes with a brief discussion of the positioning of the teaching-research nexus in the English higher education settings.

2.2 Scholarship

2.2.1 Perceptions of Scholarship

Elton (1986) deems that scholarship itself is an undervalued activity that binds together the functions of teaching and research. Without the broader understanding, and reinterpretation of a subject, research cannot be contextualised and equally teaching would be too narrow, therefore scholarship links the two.

Brew (2006a) expands on this through the development of a dimension of the concepts of scholarship. Commencing with the *preparation view* where previous literature is reviewed in order to put the research into context, there then develops the *creating view*

where from previous research new interpretations can be produced, creating something new from the old. From there the *integrating view* combines the newly created knowledge with the old, through the processes of teaching and dissemination. The *quality view* is ensured by the critical attention to detail, methodological developments and the professionalism of the process. Brew (2006a) suggests that there is a failure to deal with the concept of scholarship effectively with students, as the term is often interpreted as study skills; generic and potentially undervalued, whereas scholarship should be promoted as vital because it encapsulates the quality and ethics of the discipline.

Boyer (1990) was concerned about the ways in which an academic's life was changing to include much more administration and an increasing pressure to publish. In response to his concerns he reconsidered the academic role, and redefined scholarship to encompass more than traditional research. Boyer's redefinition of the role of academic includes four scholarly functions that underpin the life of an academic (Figure 2.1). Although they are offered as independent constructs they are interrelated with respect to knowledge production and transmission. The first aspect is the scholarship of *discovery* where answers to research questions are sought through forms of data collection and interpretation, thus advancing knowledge for the benefit of researcher and students alike. Boyer believed that it was essential for all university lecturers to be actively involved in this form of scholarship.

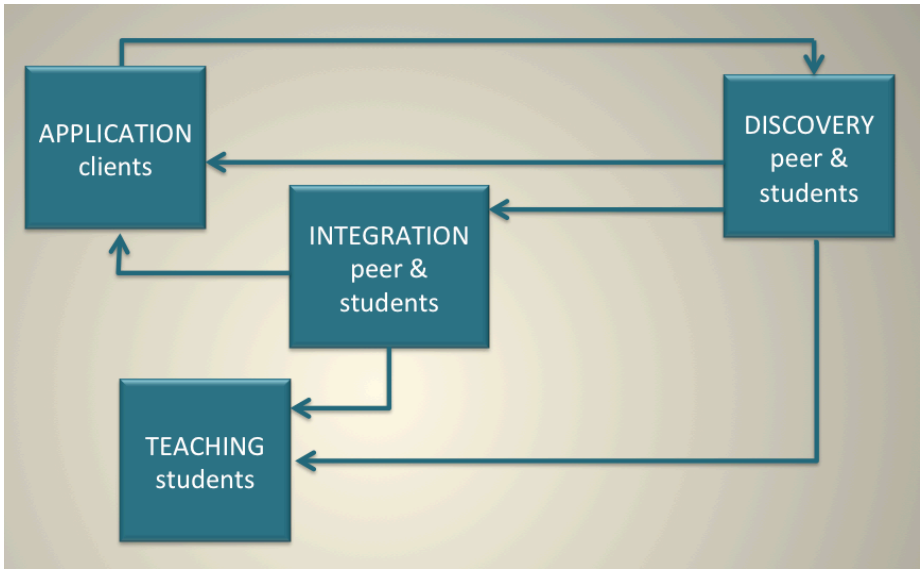

Figure 2.1 Theoretical flow of scholarly activities (based on Boyer, 1990)

Once knowledge has been created it then can be employed by the three remaining forms of scholarly activity. Although primary research may be read by academics and students in its original form, it is often synthesised with other related theories or reinterpreted by other disciplines through the scholarship of *integration*. This is the collation and reinterpretation of narrowly focused material into broader contexts, such as textbooks, for the benefit of students and academics. Outputs from the scholarship of *integration* may then inform the scholarship of *teaching.* In their synthesised form, these outputs inform students of the interrelationships of many theories within a subject area, offering a breadth of information across the curriculum. Teaching therefore involves the synthesised of knowledge. For Boyer (1990) teaching was not seen as the filling of the empty vessel, but an activity that was well-planned and encouraged students to think critically about the subject under discussion.

An alternative use of research findings may be situated outside of the classroom through various styles of consultancy. This scholarship of *application* is where those outside of academia, from both the public and private sector, may benefit from the knowledge and research skills of others. Applying theory to practice is an aspect of scholarship in itself that allows for theory refinement or falsification, and can in itself generate new insights, what Boyer terms discovery learning.

2.2.2 Scholarship of discovery

Neumann (1992, p. 169) defines research as "actively pursuing an answer to a question" suggesting an intention with a specified goal. Barnett (1992) extends this definition by stating that research is a deliberate process with specified aims although with occurrences of unpredictable setback or failure. Griffiths' (2004) explanation is more grounded, indicating a systematic process of investigation for the advancement of knowledge, but adds that this knowledge must go through a process to be made public in order to be assessed by a community of experts. Griffiths goes beyond the highly empirical view of research as pursued by the hard sciences, and expands into interpretive enquiry such as theoretical and conceptual

research, and stepping outside of the disciplinary domains in order for it to be trans or multi-disciplinary.

Brew (2001) also does not view research as a singular concept, but through her phenomenographic research she situates it within the experiences of researchers. The first dimension relates to the *aim* of the research: whether research was seen as the sum of its *products* and its tangible outputs, as opposed to the more internal conception where it is the *process* of constructing new knowledge that is the primary focus (Table 2.1). The second dimension is where the researcher is situated within the process; whether they are the focus or indeed absent. Combining these two dimensions creates four *views* on research as emerged from interviews with senior researchers from five different institutions across all disciplines.

		Research aim	
		External oriented, product-based	Internal oriented, process-based
Researcher situation	Researcher present in awareness	**Trading**	**Journey**
	Researcher absent from awareness	**Domino**	**Layer**

Table 2.1 The relationship between conceptions of research *(Based on Brew, 2001a)*

The *trading* view can be seen as a social phenomenon, where the kudos acquired from successful research, as valued by funding bids and publication, is therefore traded for prestige. The product is the paper published or presented at a conference or meeting, with a focus on informing the audience, and enhancing the researcher's social network. This approach has no direct links to teaching although the action of writing or presenting may enhance the author's or institution's reputation, which may in turn attract future students to attend the institution. An approach that focuses on the product of research but where the researcher is absent from the focus is the *domino* view. This experience is characterised by the collection of information, akin to a domino tile, which when combined with other information creates a meaningful outcome. The contribution of domino tiles to resolving the problem does not have to be purely

that of the researcher, as in a game of dominoes the outcome is produced by several contributors. To this ends the researcher sits outside of the knowledge. The impact this may have on the taught experience may be limited by the detachment from the processes or may allow for a broader understanding, which might enhance undergraduate curricula more effectively.

Brew (2001) also found that some researchers were less focused on the products of research, but more on the experiential process of undertaking research. This was most keenly felt by the *journey* view where the researcher and their personal development were clearly situated at the centre of the process. This view may allow for the transmission of experiential learning from lecturer to students through dissemination of their personal reflections. The alternative to this is the experience of those with a *layer* view who feel they have just peeled back a top layer to reveal a truth lying underneath; removing themselves from the focus as they do not feel they have created knowledge itself, rather they have clarified or drawn attention to it. This approach may be at the core of lecturing, where synthesis of other's research may allow an impartial presentation of the current nature of knowledge.

Brew's classifications do not define personalities, but indicate a range of potential experiences, where she found that researchers often fell in to one or two categories, never encompassing all views. What is important to note is that within institutional hierarchies there is a focus on the external, output driven views as the trigger for funding, therefore adding value for these approaches over those that are more personal and internal. It is interesting to consider whether the commodification of research will lead to a generation of *traders* within the knowledge economy at the expense of personal growth?

Although research may once have been seen as a process of innovation and information seeking, Barnett (1992) believes that research has become an instrumental, Government funded and initiated process, where academics are becoming alienated from the commodity produced. The focus of research has become outcome-driven as products of

research rest in the public domain as objective knowledge, with little regard for what the researcher has learnt along the way. As a result of the external political agendas that are directing research, Barnett (1992) suggests that there is the potential for a divorce between research and the curricula. He is possibly anticipating the move to Mode 2 research, where links are now made outside of their institutions, between networks of academics with shared interests, potentially at the exclusion of the students.

A problem with the politicisation of phenomena is the subsequent need for accountability. Although it may be assumed that universities have always been the producers of new knowledge, the original universities were places of learning through teaching; individuals were scholars until one knew enough to pass on the knowledge. It was the Enlightenment that promoted the scientific methods that led to a research culture (Brew, 2006a). The development of the relationship into the 21st century has been politically driven due to the changes in funding mechanisms where governments play a greater role in the direction of research due to their control over funding (Brew, 2006a).

Traditionally English universities were free to conduct research as they saw fit, with no agenda imposed upon them by the government by the block grant system (Harley, 2002). In response to the recession of the 1980s the University Grants Committee introduced Research Selectivity Exercise (Harley, 2002), where the then Conservative Government decided to reward departmental excellence. This was part of the dual support system where some university income was from funding council grants for specific projects, and the remainder from the Government as rewards to excellence in research (Macilwain, 2009). The problem with much of the government-financed research is in its short-term vision where ministries need to get a return on their investment during their period in power. The funding from the research councils allows for more progressive research as it is based on the project applications submitted by researchers rather than a response to a political agenda (Nowotny, Scott, & Gibbons, 2003).

The greatest step-change in accountability was through the introduction of the Research Excellence Framework (REF), a research evaluation process imposed on English universities from 1986 (then referred to as the Research Assessment Exercise (RAE)), where its remit was to evaluate the research outputs for each area of study, to ensure a rigorous approach to quality (Drennan, 2001). Since 1986 six Research Assessment Exercises have been conducted (Macilwain, 2009) where each RAE has changed its mechanisms of assessment, and in the latest review of the process it aimed to establish a more economically viable approach in order to reduce the estimated cost of £60 million for the 2008 exercise.

The latest iteration of research evaluation has been rebranded as the Research Excellence Framework (REF), with an increasing focus on the impact of research (Macilwain, 2009), and up to 20% of the grading being for this new criteria (Smith, Ward, & House, 2011). The revised rating of research quality is shown in Table 2.2.

Rating	Criteria
Four star	Quality that is world-leading in terms of originality, significance and rigour.
Three star	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.
Two star	Quality that is recognised internationally in terms of originality, significance and rigour.
One star	Quality that is recognised nationally in terms of originality, significance and rigour.
Unclassified	Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purposes of this assessment.

Table 2.2 Definitions of the starred levels in the overall quality profile *(Source: REF2014, 2012)*

Researchers are concerned that the direction of research will again be affected with user-focused research being undertaken instead of curiosity-driven research. Problems occur when assessing impact is through the means of metrics. These may be able to show positive

economic outcomes from medicine and science research, but may not provide a metric that assesses the contributions of history or art (Martin, 2011). Some analyses have shown that there is insufficient discrimination between some of the higher grades (Régibeau & Rockett, 2014). Previously there have been concerns that research aligned with government policy received higher ratings than research that sets new or opposing agendas, and that this became a distraction from collaborative and interdisciplinary work (Smith et al., 2011). Here the disaggregation of scores for such works devalues its creative and applied functions, leading some researchers to defer to safe and predictable avenues of enquiry (Nowotny et al., 2003). The recent Stern Report into the future of the REF has addressed issues of interdisciplinary research by allowing case studies to be submitted at an institutional level (Stern, 2016).

Views on research evaluation processes are mixed. Macilwain (2009) highlights the positive impact of the exercises, where the UK rose to the third most productive nation in comparison to other major economies for output productivity per pound spent on research. The UK having four out of the top six ranked universities in the world. Harley (2002) noted that some of the new universities saw the process as a motivator towards increasing their research portfolio.

Although Piercy (2000) states that it is important to have a device for ensuring quality research, he claims that the processes are distracting and ineffective, with academics spending too much time doing bureaucratic evidencing tasks rather than the pursuit of quality research itself. In support of this efficiency model, international comparisons of funding systems and research productivity have indicated that increasing competition for funding, through such evaluation mechanisms, does not necessarily have a positive impact on research efficiency, and in some cases may actually be counterproductive (Auranen & Nieminen, 2010). Strategic research agendas are replacing blue skies research, reducing serendipitous findings (Henkel, 2005).

These RAE and REF judgements are only made on the research activity and quality of university staff, as research-active colleagues in CBHE, are not included in this assessment. The REF is therefore an accepted acknowledgement of research proficiency of individuals within university settings, but without taking account of their effectiveness in other parts of their roles as teachers and administrators. Drennan (2001) highlights a range of rewards for teaching excellence, but not without criticism, which are discussed in the next section.

2.2.3 Scholarship of teaching

Teaching is a complex phenomenon, which is difficult to define; involving both philosophical and practical considerations. Philosophically, the *liberal arts* pursue knowledge for its own sake and personal development. The requirements being that the learning be broad, as a way of unifying diverse knowledge (Carr, 2009). This approach may link more with the traditional view of British university-based higher education, whereas *vocational* education was viewed as the narrow, utilitarian acquisition of technical skills, more in line with the polytechnic approach to higher education. Since the 1992 Education Act and massification of higher education it would be fair to say that not only has there been a merging of institutions, there has also been a merging of approaches with an increasing focus on the post-education outcomes and skills development.

At a practical level at one end of the scale, the *transmission* model, conceptualised traditionally as a teacher-focused, syllabus-driven delivery of knowledge achieved through lecture-based methods. Often employing techniques that do not necessarily encourage social or cognitive interaction, and therefore reducing the depth of personal processing by the student (Richardson, 1997). This in no way describes all teaching. At the other end of the spectrum the *constructivist* approach focuses on the facilitation of learning where students play an active role in the transformative process through inquiry-based learning (Griffiths, 2004). Teaching focuses on a process, which although intermittently assessed at points during the learning experience, continues as long as the individual is motivated to learn. Although a

curriculum may be set and taught, the learning experience is open and different for each individual, the outcomes rest in the minds and skills of each learner, based on individual activity and interpretation (Barnett, 1992).

How teaching is valued as a component of the higher education lecturer's role is very much institution-dependent and often outside of the control of the teacher. Some of these constrictions may be economic in essence, where massification and recession may impact on staff-student ratios. In addition, research evaluation systems, which contribute to levels of institutional income have overshadowed the importance of teaching and have become a primary concern of many universities. This is not the case in the CBHE sector as they are not part of the dual funding system. College lecturers are assessed annually through Ofsted's Common Inspection Framework (Ofsted, 2014), therefore teaching is a priority for any internal performance review.

The tensions that exist between the status of research and teaching have developed over time, where the Labour government sought to address the disparity in their white paper *The Future of Higher Education*:

> Teaching has for too long been the poor relation in higher education. Promotion for academics is based largely on research excellence, rather than teaching ability. There is no respected and defined separate professional career track for higher education teaching in its own right
>
> (DfES, 2003, p. 15).

As a way of addressing this disparity they sought to bring in measures to compensate through reviewing funding mechanisms to support teaching in universities with national professional standards being set for staff to achieve. To increase teaching prestige Centres for Excellence in Teaching and Learning (CETL) were established between 2005 and 2010 to promote good practice and rewards were offered through the National Teaching Fellowship Scheme (DfES, 2003). How well these systems worked in practice were debatable with criticisms that it was difficult to source evidence of excellence in teaching, and that teaching fellowships just served to enhance the differences between research and teaching (Drennan, 2001).

The subsequent Coalition government's view, as outlined in the White paper *Students at the Heart of the System* (BIS, 2011), suggested that institutions need to offer a better level of service to students through improved teaching and assessment, whilst also indicating that they need to address financial deficits, but make no indication as to how this may be achieved. Suggesting that giving students information aggregated by course through the Key Information Set data would somehow transform how managers perceive the status of teaching or how lecturers deliver in the classroom seems disingenuous. The White Paper also listed Dimensions of Quality with respect to teaching, but at no point are there explanations as to how the process variables are to be tackled (Gibbs, 2010), such as how class sizes may be reduced, contact with academics may be enhanced, feedback improved or teaching volume reduced.

This continued to be an area of concern, with the Conservative government not only reemphasising the issue, but taking steps to address it:

> Currently, not all universities assign teaching the same significance that they give research. Significant funding is allocated through the Research Excellence Framework (REF) to universities who deliver high quality research. There is no mechanism in place to reward teaching, resulting in a lack of focus on providing a high quality student experience. Some rebalancing of the pull between teaching and research is undoubtedly required: this should not be at the expense of research, but through additional incentives to drive up teaching quality.
>
> (BIS, 2015, p. 12).

To date, the approach to the evaluation of teaching had not been comparable to the evaluation of research. HE teaching is overseen by the Quality Assurance Agency for Higher Education (QAA) which assesses the degree to which institutions meet their own teaching mission statements (QAA, 2016b), which Drennan (2001) argues does not generate a gold standard to achieve, but this has now been addressed by the advent of the Teaching Excellence Framework (TEF) whose purpose is to recognise and reward high quality teaching (BIS, 2015). The BIS (2015) report, *Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice,* recognised that some HEIs with a strong research focus have a weaker view on teaching, partly driven by the funding mechanisms currently in place. The hope is that the TEF will redress this by offering funding incentives to institutions that demonstrate

excellence in teaching through an ability to increase their fees. Their definition of excellence is varied, with consideration being made to the ability to respond to the needs of different learner groups and subjects, although metrics will be applied to the assessment process (BIS, 2015).

Although CBHE will be continue to be assessed for teaching by Ofsted (Ofsted, 2014), they will also be assessed by QAA, as for the inaugural year of the TEF has allowed that all providers, including private providers and CBHE, may be included in the assessment (BIS, 2015). The TEF therefore offers the first comparable assessment between types of provision.

2.2.4 Differentiation between research and teaching

Politics aside, Barnett (1992) suggests that there are underlying similarities between research and teaching; there is structured enquiry, problem solving, creativity and criticism through interaction. But there are also great differences. Barnett (1992) acknowledges that research should be the driver of curricula, but does not believe that it is necessary for an academic to research a topic in order to teach it, the obligation, he believes, is to be a scholar. Boyer (1987) believed that there was an important role for research in the undergraduate student experience through the process of enquiry-based learning. He believed the curricula should be designed in such a way as to progress the integration of research into the learning process, commencing with the intellectual stimulation and growth of ideas through the initial year, building and consolidating into the final capstone project. It is the integrated approach of scholarship that links research to teaching where a focused component can be synthesised with other knowledge to have a broader understanding (Elton, 1986).

Although there may be relatively clear definitions of research and teaching that would allow for identification of each activity, at a practical level this is not necessarily the case. Rowland (1996) found that Heads of Departments could not always differentiate between research and teaching. On the face of it giving a lecture can be seen as teaching *imparting information to others,* but is this not the same process as giving a paper at a conference? So is

it the audience who define the activity, we *teach* students and *confer* with peers; or is it the origin of the subject matter that defines the activity; imparting integrated knowledge is teaching, and imparting discovery knowledge is research. Similar issues arose when considering the process of research supervision (Rowland, 1996); should this be defined as teaching as you are imparting information to one who is there to learn from you, or is this research through collaboration? Here it is the relationship of those involved that may define the process, rather than their status.

One explanation for changing definitions of teaching and research may be due to the changing nature of both elements where more recently research has been assessed based on its commercial value or its impact, and students are now customers to whom institutions need to market themselves (Tennant, McMullen, & Kaczynski, 2010). The role of the university is changing to meet the needs of massification and the integration of commerce. As such Brew (2006a) takes a more contemporary view on scholarship with a focus on inclusive, knowledge building communities (Figure 2.2).

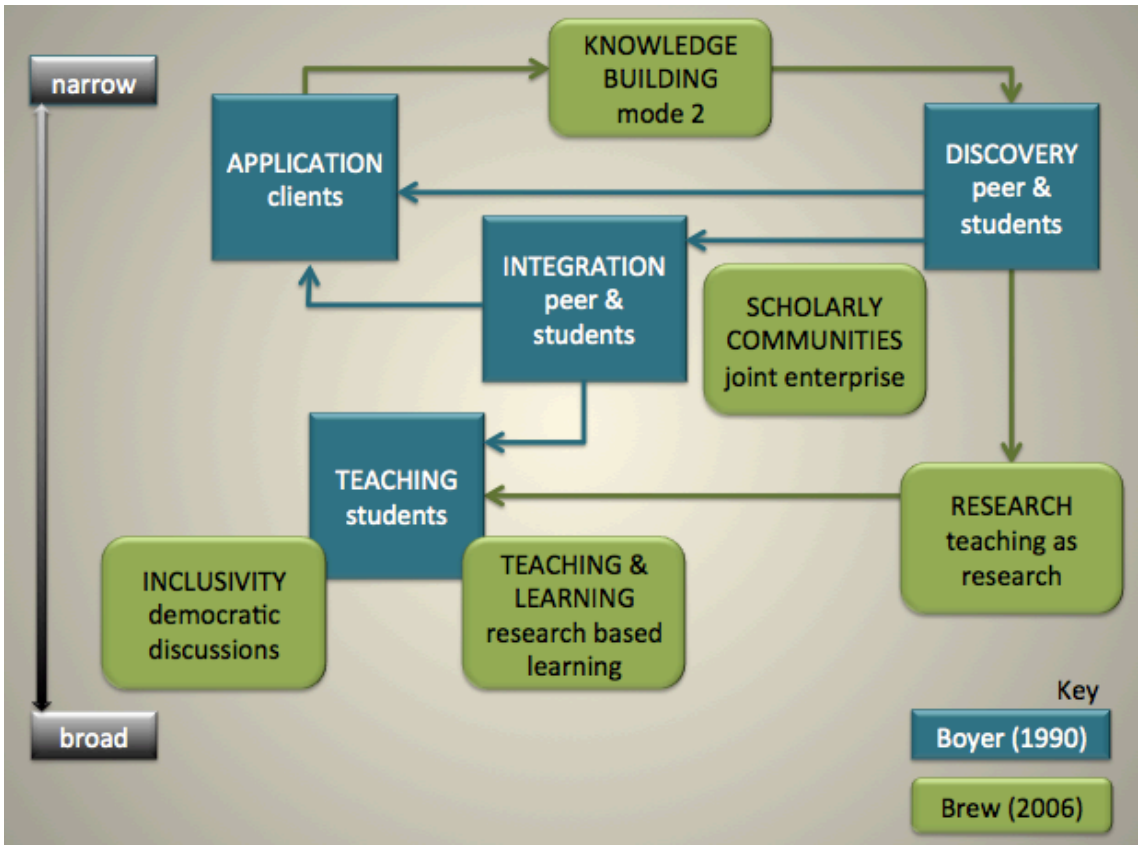

Figure 2.2 Evolving views of scholarship

Unlike Boyer's scholarship of discovery being the starting point for the other forms of scholarship, Brew expands the definition of *research* into the meaning we apply to social knowledge, reflexive in nature, where the research of and through teaching is as important as the research being disseminated in classes. Brew's approach to *teaching and learning* becomes student-focused, generating conceptual change and employing more research-based activities in the process. The students' receipt of knowledge through knowledge transmission methods is also challenged through *inclusivity*. She envisages democratic discussions conducted by all scholars, students and teachers alike at the core of teaching.

In Brew's model there is a withdrawal from the personal to increased activity by the community, specifically *scholarly communities* where there is "mutual engagement in joint enterprises" (Brew, 2006). This is seen in the growth of communities of practice, where the combination of engagement, imagination and alignment create a social learning system (Wenger, 2000). These communities of practice can take the research process outside of the purely academic discipline-specific context into *knowledge building* with non-academic organisations and communities where scholarship may also become trans-disciplinary. Meeting and working with commerce and industry partners becomes a way of assisting in the resolution of practical, social or economic problems referred to as Mode 2. Mode 1 knowledge production is seen as the traditional discipline-focused empirical research, but Gibbon, Limoges, Nowotny, Schwartzman, Scott and Trow (1994) suggest that there has been a shift in response to the changing nature of higher education. Mode 2 knowledge producers relinquish autonomy for innovation by situating the research in applied settings where the advancements in technology allow for complex collaborations through national and international networks. Critics of this development have become concerned that quality control becomes compromised by traditional academic standards as the peer review process, which involves those who were not traditionally peers in a research context, assessing the research's contribution to the situation and society, and not just its scientific excellence (Nowotny, Scott,

& Gibbons, 2003). Dependent upon how one views knowledge and scholarship there may be different views on how they are applied to the research and teaching contexts.

If politically-driven funding mechanisms have changed universities from autonomous places of research and learning, then there is a need to adapt practice to fit the evolving culture. The reconceptualization of higher education is not a new phenomenon, but Humboldt would argue that change must not be done to meet short-term political needs, but be independent of the state (Elton, 2008). The Humboldtian principle is that universities should be a learning community of scholars, including students and staff (Simons & Elen, 2007). This being achieved through interdisciplinary collaboration, and with both student and teacher being "in the service of scholarship" (Elton, 2008, p. 225), possibly the current direction of drift for HE students in both university and CBHE settings (Healey, et al., 2014; Eaton, Gower, & MacDonald, 2015).

2.3 The Teaching-Research Nexus

2.3.1 Teaching-research nexus models

How research and teaching interact within higher education is through the teaching-research nexus. Over the last twenty-five years various models have been proposed to explain different perspectives of the teaching-research nexus (an overview can be seen in Figure 2.3). These models differ based on how the students experience the nexus, be it at an institutional, departmental or lecturer level.

Neumann (1992) developed one of the earliest models, derived from interviews with thirty-three senior academics and administrators. She found unanimous confirmation of the teaching-research nexus expressed in three different ways; a *tangible* nexus, an *intangible* nexus and a *global* nexus. The *tangible nexus* refers to the transmission of knowledge, fact and methodologies, based on the belief that "only active researchers can teach at such an advanced level" (Neumann, 1992, p. 162) and to deny students such levels of expertise would

	Neumann (1992)	Ramsden & Moses (1992)	Griffiths (2004)	Healey (2005)	Trowler & Wareham (2007)
No nexus		Independent			
Institutional		Integrationist			Institutional
Departmental	Global				Lecturer
lecturer	Intangible	Strong integrationist	Research-led teaching	Research-led teaching	
	Tangible		Research-oriented teaching	Research-oriented teaching	Student
Lecture			Research- informed teaching		
Student			Research-based teaching	Research-based teaching	
				Research-tutored teaching	

Figure 2.3 Overview of teaching-research nexus models

disadvantage them. Several of Neumann's respondents also believed that students enter higher education to be taught by those who have "gone beyond the average level of knowledge" (p162) and that lecturers' research activity is more important than their ability to instruct. This assumption is problematic as the respondents' claim to understand what students want, although they rarely come into contact with students.

Further evidence of the tangible nexus was derived from interviews with academics conducted by Grant and Wakelin (2009). Respondents strongly believed that research had a positive effect on teaching, although they were vague as to exactly how this took place. When asked to expand they suggested that the process of reading and writing for publications was the underpinning factor, but admitted that this was of limited use in the classroom. The respondents in this research failed to see a reciprocal benefit, unlike that of Coate, Barnett, and Williams (2001), whose interviews with a range of academics envisaged a two-way flow.

These respondents believed that research had a positive impact on teaching and, to a lesser degree, that teaching had a positive impact on research. Respondents believed that being at the cutting edge of the field would motivate the students, and that their knowledge was current, enhanced through personal experiences rather than the product of textbooks. This perspective does seem to assume that the students want or need their lecturers to be at the frontiers of research, indeed Barnett (1992) argues that undergraduates do not necessarily have the capacity to deal with such levels of knowledge, and that it is not necessary for academics to be research-active to reach such levels; scholarly activity and professional updating are sufficient.

Where teaching was acknowledged to have a positive impact on research, this was achieved through helping the researcher articulate their ideas, and by using the students as a sounding board before the rigours of a peer review process (Barnett, 1992; Coate et al., 2001). In addition, teaching to a curriculum requires the researcher to step back from their highly

specialised focus and recontextualise their knowledge (Coate et al., 2001), adding breadth to their understanding (Neumann, 1992).

The aspect deemed as most important by Neumann's respondents was the *intangible* nexus, described as the development of a student's approach to knowledge by research-active lecturers providing a stimulating environment. The respondents described the teaching qualities of those who were research-active as being "alert, enthusiastic, excited, keen, curious, fresh, and more alive" compared to their teaching-only colleagues who were described as "repetitive, dull, un-stimulating, unexciting, dry, sterile and stagnant" (p164). The research-active lecturers were seen as more able to inspire and encourage critical enquiry in their students, a requirement of the knowledge economy. There was also the belief that research-active staff were more likely to set research-based assignments, and only they could explain the complex dynamic nature of knowledge, a view also held by the university staff interviewed by Durning and Jenkins (2005). It important to note that these are the *beliefs* of academic staff, and are not grounded in evidence from those experiencing the teaching.

The *tangible* and *intangible* nexus as described by Neumann (1992) are reflected as the *strong integrationist view* in the model proposed by Ramsden and Moses (1992), which suggests that to be a good teacher one must be research-active. Ramsden and Moses also propose two other potential views. The *independent view*, that there is no causal relationship between teaching and research, and thirdly, the *integrationist view* where a weaker link is made at the departmental or institutional level. This weaker relationship was referred to by Neumann's (1992) respondents, which she refers to as the *global nexus.* The *global* nexus connects the activities at a departmental level, allowing for the specialisms of postgraduate study, and informing course design and the curriculum at the undergraduate stages. The tailoring of the courses based on specialisms, although adding to the *intangible* experience, may lead to a biased or unbalanced curriculum, reducing the breadth of the undergraduate curriculum (Coate et al., 2001).

It is important to consider the validity of Neumann's (1992) findings when drawing conclusions about the role that the nexus plays. Firstly, the data were collected from senior academic administrators whose job it is to maximize the income stream through the positive marketing of their department and institution. On this basis it is important for them to promote the vitality of an activity that enhances their reputation and increases financial security. If no connection between the activities were evident then there would be no need for universities to undertake research *and* teaching. Institutions could specialise by becoming teaching-only educational facilities, or research-only players in the knowledge economy. This marketised approach is noted by Jenkins, Breen, and Lindsay (2003) who suggest that although the links between research and teaching are often enshrined in university mission statements, the culture may have lost its way over time. It may now be a belief that is held more strongly by university administrators than the academic staff themselves, advertising such scores as departmental currency.

A second consideration is that the data reflect their *beliefs* and are not based on empirical evidence of an effect, the respondents' comments regarding what students want is homogenized and unsupported. And finally, management's belief that being good at research automatically ensures some vitality in the classroom is unfounded, any relationships being based upon many contextual factors (Hughes, 2005).

An alternative approach to the nexus was outlined by Griffiths (2004) who developed a working structure based on the *content* of the taught session and the *activity* of the students. This produced four expressions of the nexus within teaching. These approaches are examined in more detail in Figure 2.4. Griffiths suggested that there are three mechanisms that help lecturers to get the most out of their research in a teaching context through the *emphasis of the curriculum*, the *integration of the research* and the *teaching relationship*. Griffiths saw the curricula as either *specific,* referring directly to lecturer's personal research findings, or *diffuse* which relates to experiences that occur when undertaking research. How research is

	CURRICULA EMPHASIS	INTEGRATION	TEACHING RELATIONSHIP
	Specific	**Weakly embedded**	**Unidirectional**
Research-led	Using personal research for subject content understanding	Findings delivered in lectures or from reading lists	Teacher-focused, lecture-based transmission
Research-oriented	Learning about the research processes	Teaching inquiry skills and an ethos of research	Teacher-focused with respect to their ethos
Research-based	Learning as a researcher	Active inquiry-based learning	Student-focused minimising the division of roles
	Diffuse	**Strongly integrated**	**Reciprocal**

Figure 2.4 Teaching-research nexus model (based on Griffiths, 2004)

integrated into a taught experiences that occur when undertaking research. How research is integrated into a taught session will affect the quality of the learning experience; claiming that lecturers citing their most recent publication on a reading list is not as effective as using their research activity to underpin a learning process. Griffiths suggests that the latter approach generates a union of scholarship, reducing the hierarchy that exists between student and teacher in the normal teaching situation. The final mechanisms refers to the manner in which the learning takes place, with a more positive focus on *reciprocity* where the lecturer learns from the student as well as the student learning from the lecturer.

The main focus of Griffiths' views is that the lecturer would be using their own research findings and experiences within the learning process, an emphasis not made in Healey's (2005) reinterpretation of Griffiths' model (Figure 2.5). Healey considered the way research was introduced into the curriculum, regardless of the originator of the work, through the development of two dimensions.

The first dimension centres on the content of the learning experience; be it the products of research, or the processes. The second dimension refers the student's role in the learning process: whether the student was a passive absorber of knowledge or playing an active role. The integration of the dimensions accommodates a fourth typology, which Healey refers to as *research-tutored.* The research-tutored approach involves a more participatory appreciation of theory, applications and findings by comparison to the *research-led* approach.

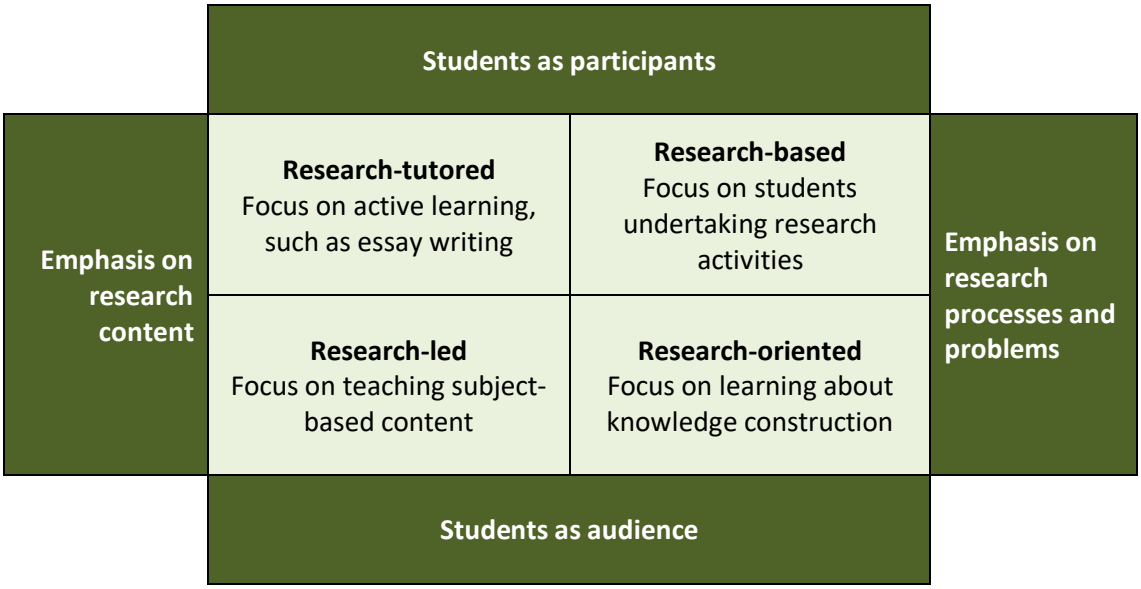

Figure 2.5 Teaching-research nexus model (based on Healey, 2005)

The *research-oriented* approach is a passive teaching style where students learn how knowledge is constructed, such as a research methods lecture. The *research-based* approach uses inquiry-based learning, allowing the acquisition of research skills, leading to a depth of understanding of knowledge construction from experiential learning. Immersion in such detail will enable students to make value judgements on the research used to support the theory.

The additional focus of Healey's model is the consideration of the students' level of activity within their learning experience. As Biggs and Tang (2007) suggest, active styles of learning can increase students' performance. They argue that passive learning styles, as experienced in some lecture theatres, may allow the more able learners to excel through employment of deeper learning strategies, but the less academic student may show surface learning, not progressing further than basic note-taking. Biggs and Tang's finding support the need for a more interactive approach in order to maximise the learning experience, therefore inclusion of active learning in Healey's model is important. How this has been applied in different contexts will be examined in more depth in Chapter 6.

The ways in which these approaches may feature within the taught session were detailed in Trowler and Wareham's (2007) model. Their paper highlights seven stances that

those who support the nexus typically take (Table 2.3). The first three involve students actively participating in research to some degree, a consideration not made by Neumann or Ramsden and Moses. Firstly through the learners undertaking independent research activities, or through collaborative research with their lecturers, or through research being embedded into the curriculum.

Alternatively Trowler and Wareham (2007) consider how the nexus has been conceptualised by the research activity of the lecturers. Students benefitting from the enthusiasm generated by research-active lecturers, which permeates into the lectures, or through the more structured student-staff discussions about their research interests. Their final interpretation of the nexus relates to research existing outside of the discipline-focused classroom, through pedagogic research or the university's links to the wider world. Although Trowler and Wareham have helped to unpack the range of interpretations of the term, they do not necessarily see benefits in the nexus. They believe that many of these situations distract

Scale	Nexus	Explanation
Student	Learners do research	Replication of real research-activity
	Teachers and learners research together	Student-staff collaboration
	Research embedded into the curriculum	Teachers' research defines the curriculum design and implementation
Lecturer	Research culture influences teaching and learning	Discussion of research activities so the culture research-active culture permeates
	Teachers do research	Teaching students about their research activities
Institutional	Teaching and research linked through the institutional culture	Mode 2 involving varied commercial and educational stakeholders
	Teaching and learning influences research	Pedagogic research projects refined through teaching experiences

Table 2.3 Interpretations of the nexus through the scale approach

from the process of knowledge transfer, or are at the expense of discipline-focused knowledge. They also focus strongly on the products of activities, as if the value of learning is solely the artefact produced. What they do not acknowledge is the process that underpins

every research paper, which is a learning experience. What this typology does highlight is that it is not possible to situate the nexus, as it does not exist solely within the classroom, therefore it may be the experiences outside of the classroom that have an impact, or even the more nebulous notion that the research culture of the institution as a whole may play a role.

2.3.2 Teaching and research abilities

The teaching-research nexus claims that students and lecturers benefit from the linking of teaching and research, but what evidence is there that a competent teacher is an equally competent researcher? The *Generic Underlying Ability Model* seeks to answer this question by suggesting that there is an overlap of skills between required for each domain. Smeby (1998) suggests that research and teaching both require elements of learning, therefore strands of the same activity. The *interpretive* view would concur if research is viewed as a process, and not a product (Brew, 1999). The tasks undertaken during the research process are those closely associated with that of learning; conceptualisation of knowledge, critical inquiry and scholarship, therefore the teacher is the expert learner (Brew, 1999) thus linking the two processes. Even if considered from a product perspective, both research and teaching lead to the acquisition of new knowledge. Research leading to new knowledge to the individual, as well as the discipline, whereas teaching leads to a reconceptualization of previously held knowledge which is therefore new to the students (Brew & Boud, 1995). Barnett (1992) however, is sceptical of this view as the primary function of teaching is that learning takes place, whereas any learning that occurs whilst undertaking research is incidental.

Elton (2001) argues that the generic skill underpinning research and teaching is that of communication. The researcher needs to have a fully formed understanding of the ideas that they wish to disseminate when writing papers, expressed at a level of complexity in line with their own comprehension. The teacher, on the other hand, needs to understand the concept that they wish to convey, but must convert these ideas into a format that is accessible to the level of student in the classroom. Some may see the communication within the classroom as a

lesser form, as the ideas conveyed may not be as complex. Alternatively, it could be argued that the skills required to teach are more complex as the teacher needs to have an understanding of the parameters of the audience's cognitive skills, and the ability to reinterpret complex ideas to match the audience.

2.3.3 Methodological issues related to assessing the teaching-research nexus

If the teaching-research nexus is a concept that has no agreed working definition, and cannot be situated, then the implications for studying the concepts are problematic. As such, research examining the teaching-research nexus must be treated with caution as there are fundamental concerns about the methods employed to make such points.

Measures of Research

When examining the teaching-research nexus, researchers typically assess either the *quantity* or the *quality* of research. Quantity is either assessed through the number of publications achieved throughout the career of the individual, or those published within a recent specified period of time. As such research is aiming to establish patterns between research and teaching then the measures need to be comparable, therefore the current research activity should be assessed, rather than lifetime contributions (Feldman, 1987). Another problem in assessing quantity is acknowledging the value of different forms of publication. A pure summation of the number of publications may reduce the value of the data as one academic may spend several years producing a seminal text, where another may successfully submit four articles in the same time period. For this reason a variety of methods of weighted summations have been designed where differential scoring occurs based on the perceived value of that type of output (Marsh & Hattie, 2002).

Quality tends to be measured by number of citations that an individual paper receives as an indication of how much the discipline values their work. The H-index is an extension of this measure, where output is calculated by the number of papers published and the number of citations received (Hirsch, 2005). More recently a new metric has been applied to the

evaluation of research quality through the impact agenda, defined as, “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia”(HEFCE, 2016, p. 4). Although this may seem like a more meaningful assessment of quality it has not been without its critics who point out issues of time-lag, where it may take up to twenty years to reap the benefits of some research (Manville, 2014).

A singular focus on the products of research ignores activities that underpin the research process. In order to represent the range of tasks undertaken more meaningfully, some researchers have separated the processes from the products, attaching values to activities, such as research grant applications and editorial roles (Ramsden & Moses, 1992). Marsh and Hattie (2002) have extended this by addressing the mediators and moderators of research activity through a survey which assesses the researchers’ activities, motivations and goals through a relatively extensive psychometric test. This approach gives richer detail to the findings through examination of the cognitive processes involved, but results may be inflated due to the self-report method.

Measures of Teaching

The most commonly used metric to assess teaching, within teaching-research nexus research, is the institutional measure of student-rated teaching effectiveness (Feldman, 1987) and satisfaction (Marsh & Hattie, 2002), both of which have been criticised for their lack of item validity, structural validity and generalisability (Spooren, Brockx, & Mortelmans, 2013). This data may be affected by students’ motivations. Some students take an instrumentalist approach towards their studies and evaluate how much the lecturer has facilitated their exam performance, whereas others may enjoy the topic so are favourable towards that lecturer. Equally, students maybe assessing positively as they feel the lecturer has helped them develop the skills they will require in the workplace (Elton, 2001). Consideration must be given to the type of class that the students are assessing; whether it is an intimate postgraduate seminar or

an introductory module held in a vast lecture theatre (Jenkins, 2004). As academics may have no control over class sizes the assessment may not be of the individual, but the method of delivery that has been imposed upon that module (Arnold, 2008).

The level of student being taught may impact on the relationship with research (Horta, Dautel, & Veloso, 2012). In line with much of the other quantitative research, Horta et al. (2012) found a negative relationship between hours spent teaching undergraduates and lecturer research outputs, except in the case of postgraduate students, where a positive relationship emerged. This pattern reversal may be due to the publication of work collaboratively produced with their students.

Unlike research, teaching is not assessed on quantity, only quality (Brew & Boud, 1995). This may imply that any research that is being undertaken, regardless of quality, is worthy of inclusion, but no account is taken of the number of hours lecturers may teach as an equivalent. Until the measures of research and teaching are made more equitably it is difficult to make accurate judgements or meaningful comparisons as to the existence of the teaching-research nexus (Verburgh, Elen, & Lindblom-Ylänne, 2007).

Correlational research

As the area of interest is the *relationship* between teaching and research, correlational analysis is generally applied, although such analysis does not establish cause and effect. It may be that other mediating factors are playing a systematic and unobservable role, or one that has not been measured. A specific statistical problem of conducting correlations on these measures of teaching and research is the infrequency that lecturers publish greatly reduces the range of scores for the research variable when compared to the measurement of teaching (Hattie & Marsh, 2004).

Exactly what constructs are representing each variable must also be considered. Is research output being assessed at an individual or departmental level? Is the assessment of teaching a measure of competence or excellence, and by criterion or norm referencing? Is the

measure being used subjective or objective? In addition, any correlation may be strongly influenced by who is being asked about the relationship; student, lecturer or manager (Elton, 2001), their gender, age, the point that they are in their career, or even the type of institution in which they reside (Robertson, 2007). As Brew and Boud (1995) argue, teaching and research quality are only ever defined on the measures available to assess them.

Just because two activities are conducted in one institution does not necessarily mean that there is a relationship between these functions. The majority of correlational research published indicates that there appears to be no direct relationship between measures of teaching and research; the occasional correlations that are found are either weak or inverse (Brew & Boud, 1995; Jenkins, 2004; Zaman, 2004). It may be a lack of differentiation between some measures leads to near-zero relationships (Feldman, 1987; Marsh & Hattie, 2002; Ramsden & Moses, 1992). For example, those lecturers that create a positive relationship by being highly organised and experienced at both aspects of the job may cancel out the data from those generating a negative relationship (Feldman, 1987). Equally, if data are being analysed at a departmental level it may be the differences in departmental ethos that leads to two opposing correlations to create a near-zero finding (Marsh & Hattie, 2002). Therefore it could be that the instruments being employed to measure these factors are too blunt for the task at hand, therefore a consideration of finer measures may add to the detail.

2.4 Factors mediating the teaching-research nexus

2.4.1 Impact of student level on the applications of the teaching-research nexus

An important consideration when examining the teaching-research nexus is the level of the students being taught. Many studies that rely on data from students in the first two years of undergraduate study find negative relationships between research and teaching ability and effectiveness (Arnold, 2008; Coate et al., 2001; Durning & Jenkins, 2005). This lack of correlation observed in the early undergraduate years may be due to the curriculum being too

broad at this stage, with less room for the specificity of lecturer's specialism due to the subject benchmarking (QAA, 2011).

If the lecturers' research specialism is not applicable at the undergraduate level, then should the teaching-research nexus matter in the early undergraduate years? Physics lecturers interviewed by Smeby (1998) indicated that linking personal research to teaching is vital for three reasons. Firstly, that students will benefit from lecturers' current knowledge. Secondly, that teaching becomes more effective if personal examples are used to exemplify points. Finally, that the inclusion of personal experiences create a critical attitude to the subject that students benefit from. These findings are based on the lecturers' beliefs, they do not offer evidence to suggest that teaching would not be effective without being research-active.

Conversely, research examining the data for final year undergraduate and postgraduate students found a positive relationship between research and teaching (Arnold, 2008; Coate et al., 2001; Durning & Jenkins, 2005). The nexus is experienced mostly notably through the supervision of postgraduate students (Woodhouse, 2001), where the lines between teaching and research become more blurred (Neumann, 1992). At this level the student experience resembles that of the researcher (Jenkins et al., 2003). The students will be studying a topic in-depth and may benefit from the research experiences of their supervisors, whereas teaching postgraduate students increases the lecturer's research profile through co-authored papers (Jensen, 1988). At a departmental level it is postgraduate students who most benefit from the facilities that come with research-active departments (Neumann, 1992).

Care must be taken when drawing conclusions as although there may be relationships between student experience and research outputs, there may be underlying factors unaccounted for in the findings. Students in the early undergraduate years are more likely to be enrolled on generic modules in large lecture theatre style provision therefore may not enjoy this experience as much as those attending elective modules, involving a seminar-style delivery, that they experience in the latter years (Arnold, 2008). If this student experience is

then combined with the likelihood of being taught by an inexperienced lecturer in the early years, and a seasoned researcher in the latter years, the correlation is not comparing like with like (Arnold, 2008), it is relating delivery style and lecturer career level.

2.4.2 Impact of discipline on the applications of the teaching-research nexus

Another factor that is important in understanding the relationship between teaching and research is through classification of the disciplines (Table 2.4) along the academic domains of hard-soft and pure-applied disciplines (Biglan, 1973).

	Hard	Soft
Pure	biology chemistry mathematics	sociology history art
Applied	mechanical engineering dentistry medicine	business education nursing

Table 2.4 Classification of academic domains (*Source: based on Schommer-Aikins, Duell, and Barker (2003)*

Scholarship within the hard disciplines is defined as having a paradigm, which helps organise knowledge and methods, whereas scholarship within the soft disciplines do not lack a paradigm, but are idiosyncratic. The second dimension deals with applicability; pure disciplines lacking the overt problem-solving qualities of the applied disciplines. Although there are critics of the application of such domains (Schommer-Aikins et al., 2003), the classifications are based on the findings from previous research (Karimi, 2014; Neumann, Parry, & Becher, 2002).

At a discipline level there is consensus that the links between teaching and research are much stronger in the soft subjects by comparison to the hard subjects (Coate et al., 2001; Jensen, 1988; Smeby, 1998). This view was extended by Robertson (2007) who constructed a disciplinary perspective of the teaching-research relationship from her interviews with a range of lecturers (Figure 2.6). She found that those working in the hard, scientific disciplines felt that there was a *weak* relationship or the relationship was through the *transmission* of the

lecturer's research to the students. The *hybrid* relationship was evident in the soft disciplines where there is the expectation that students become involved in research activities. The *symbiotic* relationship is the acknowledgement that teaching and research involve the same underlying activity; learning through knowledge acquisition and skill development, activities shared by students and lecturers alike. The final stage, the *integrated* relationship, is explained by a more holistic approach to learning where the process of teaching is seen as a mutual engagement in the learning process, experienced more in the humanities.

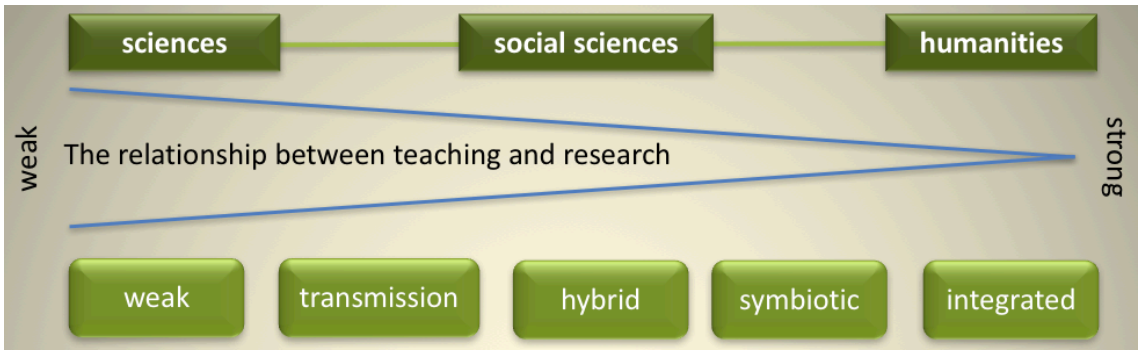

Figure 2.6 The teaching-research nexus through disciplines (based on Robertson, 2007)

Lecturers teaching *soft* subjects felt that their research benefitted from their teaching (Smeby, 1998), however, Neumann (1992) found that those from *hard* subjects felt this less likely to be the case. There were thought to be more opportunities to discuss current issues in social sciences, whereas undergraduates in the natural sciences would not have a sufficient grasp of the discipline to discuss current research. Those working in the *hard* disciplines also claimed that the undergraduate curriculum needs to focus on basics, therefore cutting-edge research is inappropriate at this level (Smeby, 1998).

Those working in the pure disciplines felt that their research profile had a positive impact in the classroom, promoting a career in academia, whereas in the applied disciplines the students' aim was to be a practitioner so their role model was less likely to be a lecturer unless they had been active within the profession (Neumann, 1992).

Again it is important to consider the differing nature of the disciplines as to how one might define research. Those from the hard pure sciences are more likely to be undertaking

empirical research projects and contributing to the global research press. Those disciplines such as languages or arts may not research in the same manner (Jensen, 1988) due to differences in language or forms of dissemination. The modules that are likely to be studied within discipline types may also affect the likelihood of such links being made. The sciences and social sciences are more likely to include modules on research methods, offering more opportunities to discuss the practical issues that arise from research in these contexts (Durning & Jenkins, 2005).

2.4.3 The asymmetrical relationship

The asymmetrical relationship indicates that research is perceived to have a more positive affect on teaching than teaching has on research activity (Hattie & Marsh, 1996; Jensen, 1988; Smeby, 1998), especially when working in the soft and applied disciplines, and with postgraduate students. So in what ways can teaching have a positive impact on research?

Teaching, especially at undergraduate level has been seen to enhance the research process by requiring researchers immerse themselves in the broader discipline, pulling back from their specific research focus (Jensen, 1988). This wider perspective has helped researchers see how their current research interests have wider currency within the subject area (Marsh & Hattie, 2002; Smeby, 1998). New lecturers reported that reading for teaching helped them understand their subject area more thoroughly (Smeby, 1998), filling gaps in their knowledge (Marsh & Hattie, 2002). This was a view echoed by Rowland (1996) who found that even for experienced lecturers, it was useful to reengage, as it puts teachers in the position of learner again.

Benefits have also been seen when dealing with specific research projects. Discussions with students aided the formulation of ideas, and their comments and questions have been constructively critical or completely novel (Smeby, 1998). This view is not universal, an audit of New Zealand HE undertaken by Woodhouse (2001) found a more extreme response, where

academics saw the relationship to be unidirectional with few benefits to research from teaching except the recruitment of postgraduate students to their research groups.

2.5 Factors that limit the teaching-research nexus

Although it may be assumed that the teaching-research nexus is important for all stakeholders, there is not necessarily a balanced engagement with it. There are several explanations as to why this might be the case, essentially fiscal concerns underlie each model.

2.5.1 Impact of government policy on institutions

Why lecturers engage with the nexus may be explained at a macro level where, if a government commits to the nexus, it becomes incorporated into policy as is evident in the Swedish HE system (Taylor, 2008). In England the approach is quite the opposite where different funding mechanisms are applied, highlighting the lack of connection between teaching and research. The *Bureaucratic Funding Mechanism Model* suggests that the two mechanisms are unsupportive of each other, and even the Higher Education Funding Council for England offer a view that supports this separation, "Teaching needs scholarship and scholarship depends on, and is distinct from, research" (HEFCE, 2000, p. 5). This may lead to conflict at an individual level as staff are having to please two masters (Taylor, 2008).

In the case of research, the Research Excellence Framework is the process that evaluates research outputs using specified criteria to produce a departmental quantitative rating. Whereas teaching is now assessed through the Teaching Excellence Framework (TEF, 2016a) an optional scheme aimed at grading institutions in terms of their teaching quality initiated in 2016 (HEFCE, 2017). Although the proposed TEF aims to increase the quality of HE teaching by the introduction of core metrics, there is much debate about what excellence looks like and how a reduction in the variation of teaching quality can be achieved, whilst still

acknowledging that different methods impact on different learner types, across different disciplines (Forstenzer, 2016).

The utilisation of these metrics as a measure of the teaching-research nexus, although convenient, does not necessarily produce meaningful insights. The measures themselves may be skewed by the *halo effect* whereby the reputation of the institution or department impacts on both scores (Zaman, 2004). The measures do not always acknowledge the form of research being undertaken, where pedagogic research was felt to be undervalued by earlier iterations of research evaluation processes (Jenkins et al., 2003).

When teaching and research are considered together, positive relationships may emerge but the degree of funding that institutions receive may be acting as a confounding variable. The elite, research-intensive institutions have better funding, which allows them to offer much higher staff-to-student ratios, which leads to more effective learning and thus better student experiences (Elton, 2001). Rowland (1996) believes that while there is a quantitative focus on aspects of the profession there is avoidance of an important philosophical debate regarding scholarship. Brew (1999) agrees, arguing that these forms of assessment only focus on the objective aspects of the work, ignoring the subjective process undergone by those involved.

Over and above the historical fact that universities have for some time conducted both teaching and research, it seems that if they are so different in their nature why are they not separated out at either an individual or institutional level, by establishment of research universities and teaching universities? Institutionally there are several arguments against such a move. On the one hand it is argued that it is the research reputation of the institution that encourages students to apply, therefore generating their second funding strand (Brew, 2003). One way that institutions have dealt with this is through the creation of Science Parks, where research is undertaken on university property, but disconnected from the teaching side of the

institution, and staff are employed on research-only contracts (Coate et al., 2001). This way they retain the funding streams and reputation, but at the cost of the nexus.

In addition to this are the vagaries of different political ideologies regarding education. Therefore any political move towards research-only and teaching institutions may be counter-productive with a change in government (Elton, 1986). HEFCE (2000, p. 3) suggest that such a move should be resisted in order to preserve “dynamism and diversity”.

2.5.2 Impact of Institutional policy on departments

From a departmental perspective the dual funding structure employed in England funds each strand of activity separately, which may impact on how managers allocate workload. Coate et al. (2001) found that the high-intensity research institutions took a collegiate approach to time allocation where they saw the management of tasks being separate, but intellectually equal. Managers in lower-intensity research establishments have more strategic approaches with independent committees for teaching and committees for research, therefore reducing the potential nexus. This was a view also reflected in interviews undertaken by Rowland (1996, p. 10) with the Heads of Departments, where it was suggested that “there were dangers in spending too much time on teaching” whereas no such warning was offered about time spent on research. The disproportionate emphasis on research has led lecturing staff to undertake research outside of working hours in order to meet their targets. The increase in workload reduces morale and well-being, and increases feelings of deprofessionalisation (Coate et al., 2001).

Rowland (1996) also found that although the Heads of Department that he interviewed rated teaching and research as equally important, it was noted that the promotion system was biased in favour of lecturers’ research rather than their teaching qualities. In similar research Directors of Quality explained that this was because candidates often achieved very similar scores on measures of teaching performance, therefore the measure of research effectiveness is used as a differentiator (Drennan, 2001). It may be argued that if the

measures of teaching effectiveness are generating such similar ratings then the measure may not be fit for purpose. If managers believe that both aspects of the job are equally important then why is research the driver for workload allocation (Coate et al., 2001). Equally, those who are not producing sufficient quantity or quality research outputs have been threatened with increased teaching loads as punishment, therefore reducing the time available to them to enhance their research skills (Leisyte, Enders, & de Boer, 2009).

2.5.3 Impact of policies on lecturers

Due to lecturers' lack of control over workload, and different mechanisms of assessment for teaching and research, Marsh and Hattie (2002) suggest, through the *Scarcity Model,* that although lecturers may be equally competent researchers and teachers, this positive relationship is counterbalanced by the time restriction to conduct both activities effectively (Durning & Jenkins, 2005) and energy to sustain the activity levels (Leisyte et al., 2009). This has led to an asymmetric relationship, where a negative correlation between time spent on research and teaching indicates a prioritisation of one over the other (Hattie & Marsh, 1996). An inverse relationship between time spent teaching and research outputs (Hattie & Marsh, 1996) indicated that if teaching interferes with research productivity it might lead to lecturers prioritising research for their own career's sake or to meet departmental expectations.

An asymmetrical pattern suggests that there was not a similar positive association between time spent teaching and quality of teaching (Feldman, 1987; Marsh & Hattie, 2002). Smeby (1998) found that an increase in teaching hours had a disproportionate effect due to the duties associated with it, such as an increase in administration and marking, adding to the competition for time. The lack of control over timetabling also interfered with the research process. From this, one may conclude that research benefits from more time applied to it, but teaching may not.

Marsh and Hattie (2002) considered possible explanations for these findings by testing a *Theoretical Model of the Relations Between Measures of Teaching and Research*, proposed

by Marsh in 1987, which includes measures of ability, motivation, time and outcomes. The model proposes that individual abilities dictate the direction of the relationships between motivations and time available. Therefore those who perceive themselves to be good researchers are motivated to research, and produce positive relationship with time spent researching and the outcomes of research. The results show the antagonism between the activities, which helps explain the lack of correlation.

The differences in observed may be due to a conflict between the two activities as explained by the *Divergent Rewards Model*. There are differences in the rewards institutions offer staff through promotion opportunities, where research outputs are valued higher than the ability to enthuse a new generation of learners (Marsh & Hattie, 2002). This view was echoed by academics from post-1992 institutions who did not believe it vital to be research-active to be a good teacher, but felt it was more productive to their career prospects (Durning & Jenkins, 2005). This pattern was replicated in hiring and promotion opportunities, where managers assumed that hiring a high quality researcher meant they were hiring a high quality teacher (Coate et al., 2001).

Alternatively status outside of the institution may affect prioritisation, where the public status that comes from being eminent in your field may also reinforce research behaviour, balanced by the lack of such status from teaching. Rowland's (1996) interviews found that although there was more kudos attached to research, the respondents did not want to be pure researchers, as this may be quite a solitary existence, but they did indicate that they would like to dedicate more time to research. Jensen (1988) similarly found that university lecturers were resistant to moving into research-only establishments due to the highly political nature of the work and the lack of young enquiring minds to exchange ideas with.

2.6 The Teaching-Research nexus in the Context of English Higher Education

2.6.1 The evolution of the teaching-research nexus in English universities

Universities in England have not always been places of teaching and research (Anderson, 2006). Oxford, emerging around 1096, followed by Cambridge in 1209, were principally teaching institutions (Lewicki & Bailey, 2009). These two seats of learning dominated English HE provision until the nineteenth century, where followed two periods of expansion. Prior to the First World War other educational institutions, such as medical colleges, became the red brick universities (Whyte, 2015).

It was not just universities that offered HE prior to the Second World War; technical colleges were responsible for delivering HE, predominantly to adult learners, at sub-degree levels, such as Higher National Diplomas (HNDs) whilst the universities maintained control of full degrees (Anderson, 2006). The HE sector expanded as a result of the Robbins Report (CHE, 1963), which stated that HE should be open to all those who were qualified to participate, concluding that it was possible to increase the quantity of provision without sacrificing educational quality. The growth of the student population led to a doubling in the number of universities from twenty to forty-three between 1961 and 1969 (Table 2.5). The Robbins Committee was also concerned with the standing of research in the UK, and recommended expanding postgraduate opportunities, increasing progression to postgraduate study from twenty to thirty per cent (CHE, 1963).

The movement of HE from an elitist system to mass education was seen by some as a crisis within the sector (Scott, 1998), but open access to HE does not necessarily mean that quality has been lost as a function of quantity. What massification lead to was diversity. Diversity in the types of courses offered, and diversity in student type through ability, background and expectations, therefore impacting on curriculum and teaching (Beerkens-Soo & Vossensteyn, 2009).

Pre-1992 Universities			Post-1992 Universities (first wave)	Post-1992 Universities (second wave from 2000)
Ancient	1000-1300	University of Oxford University of Cambridge	Anglia Ruskin University Birmingham City University Bournemouth University University of Brighton University of Central Lancashire De Montford University Coventry University University of Derby University of East London University of Greenwich University of Hertfordshire University of Huddersfield Kingston University Leeds Beckett University University of Lincoln London Guildhall University Liverpool John Moores University London South Bank University Manchester Metropolitan University Middlesex University University of North London Northumbria University Nottingham Trent University Oxford Brookes University Plymouth University University of Portsmouth Sheffield Hallam University Staffordshire University University of Sunderland Teeside University University of West London University of Westminster University of the West of England University of Wolverhampton Cranfield University	University of Gloucester London Metropolitan University University of Bolton University of the Arts London Roehampton University Canterbury Christ Church University University of Chester University of Winchester Liverpool Hope University Southampton Solent University Bath Spa University University of Worcester University of Northampton University of Chichester University of Bedfordshire Edge Hill University York St John University University of Cumbria Buckinghamshire New University* University of the Creative Arts University of Law University College Birmingham Bishop Grosseteste University Arts University Bournemouth Falmouth University Harper Adams University University of St Mark & St John Leeds Trinity University Royal Agricultural University Norwich University of the Arts Newman University, Birmingham BPP University* St Mary's University, Twickenham Arden University* ** private providers*
19th Century	1300-1900	Durham University University of London Victoria University (Manchester)		
Red brick	1901-1910	University of Birmingham University of Manchester University of Liverpool University of Leeds University of Sheffield University of Bristol		
Civic	Post WWII - 1960	University of Reading University of Nottingham University of Southampton University of Hull University of Exeter University of Leicester		
Plate glass	1961-1970	University of Sussex Keele University University of East Anglia University of York Newcastle University Lancaster University University of Kent University of Essex University of Warwick Loughborough University Aston University Brunel University University of Bath City University, London University of Salford Royal College of Art The Open University		

Table 2.5 University by period that status was granted

Some feared that massification would lead to reduced teaching quality, as the funding did not match the rapid rise in student numbers. To some degree this disparity was absorbed by the mass lecture, with classes in excess of 1000 students on some introductory modules (Arvanitakis, 2014), and a decrease in contact hours (Smeby, 2003).

Relative stability reigned in the provision of HE for twenty years until the Further and Higher Education Act (1992) through which polytechnics were permitted to apply for university status if over 55% of their full time students were enrolled on HE programmes. The former polytechnics maximised the opportunity, doubling the number of universities in the UK to eighty-four (Anderson, 2006). As a result of this development there was a fear that only the elite would have access to research in research-dedicated universities, and that many academics and students would be deprived of this experience (Brew, 2006b). Their fears were not borne out as the 2001 Research Assessment Exercise (RAE) confirmed. The second RAE since the post-1992 expansion showed that the new universities had met the demands of their new status and had produced impressive research portfolios (Griffiths, 2004). This suggested that even while working under a binary higher education system, the polytechnics had indeed been research-active (Beerkens-Soo & Vossensteyn, 2009).

The expansion of the HE sector continues, with a further ten colleges granted university status by 2012 to help meet this need (The Telegraph, 2012). The impact is that the UK has reached 41% participation; verging on *universal* higher education (OECD, 2014).

2.6.2 The introduction of further education colleges to the higher education sector

Similar to the vocational nature of England's first universities, where the emphasis was on the training of lawyers and the clergy, FECs originated from a vocational background (Anderson, 2006). It was the conclusions and recommendations of the 1997 Dearing report, on behalf of UK National Committee of Inquiry into Higher Education, that motivated the introduction of FECs as providers of HE in partnership with higher education institutions (NCIHE, 1997). Dearing's recommendations were strongly focused on widening participation, promotion of HE

to non-traditional learners, combined with removal of the undergraduate student numbers cap. This was to be supported by more focus on teaching and learning, where university lecturers without teaching qualifications should receive such training, integrated with the new teaching and learning strategies. Although the Dearing Committee stated that no new universities should be created, they advocated local provision to increase participation by franchise partnerships between FECs and HEIs (NCIHE, 1997). Franchising was defined, in this context, as "the delivery of whole or parts of a course in an institution other than the centre in which it is developed and validated" (Woodrow, 1993, p. 207). It was developed based on an American model where formal agreements for funding and quality are made from which both parties benefit (Woodrow, 1993).

Prior to the Dearing Report, HE had already been part of FEC's remit with vocationally-based sub-degrees, in the form of Higher National Diplomas (HNDs) or Certificates (HNCs) and professional certification being part of their portfolio. The Labour's National Skills Task Force (NSTF) proposed the development of foundation degrees (Fd) with clear progression routes to Bachelors level (DfEE, 2000). The success of these franchise arrangements have led to an increase in Level 6 qualifications being offered by colleges, and CBHEs' inclusion in HEIs' measures of quality, including positive endorsements of their provision as predicted by Abramson, Bird, and Stennett (1996).

The number of students enrolled on Fds increased from 4,320 to 99,475 between 2001 and 2009, with an average annual increase of students qualifying of 25% (HEFCE, 2010), with CBHE courses accounting for less than ten per cent of the HE provision in the UK (HEFCE, 2009). Interestingly no data have been published since 2010 and subsequent correspondence with HEFCE suggests that there is no intention to produce any data in the foreseeable future. This means that the trends in non-traditional learner enrolment cannot be mapped through this widening participation focused educational provision.

The HEFCE (2006) consultation on the role of CBHE acknowledged the strengths of the sector through its flexibility in teaching and learning, and its responsiveness to the local market trends, ensuring relevant skills are provided to meet economic needs. Although research is not the remit of CBHE, their teaching provision has not shown to be inferior to that offered by universities (Creasy, 2012), as the QAA reviews found ninety per cent 'confident' ratings for academic standards and ninety-nine per cent 'commendable' for the quality of learning opportunities (HEFCE, 2006).

In 2011 the UK coalition government published a white paper called *Higher Education: Students at the Heart of the System*, outlining their vision for the future of higher education. They stated that, "We expect this to mean more higher education in further education colleges, more variety in modes of learning and wholly new providers delivering innovative forms of higher education" (BIS, 2011, p. 3), a view reiterated by a research paper commissioned by the Department for Business, Innovation and Skills:

> The government aims to "drive competition and innovation", through a more market-based approach to higher education, allowing students to choose between a range of types of providers (BIS, 2013, p. 7).

This free-market approach has had implications for all providers. In order for FECs to continue to expand their diverse range of HE provision, regulatory barriers were removed to enable a level playing field; including increased competition for securing student numbers, the ability for FECs to apply for foundation degree awarding powers (Further Education and Training Act, 2007) , and the more recent extension to full degree awarding powers (BIS, 2011).

There are inherent problems linked to this form of provision. CBHE's reputation of lacking personnel, equipment and drive to be research-active institutions limits their access to resources should they wish to pursue a research agenda. Alternatively, an asset of CBHE is that their smaller class sizes allow for more skill development and a focus on individual learners, compared to lecture hall provision at university (Bandiera, Larcinese, & Rasul, 2010), but this

can potentially create problems of confidence and assimilation when students' progress into the larger, culturally different HEIs (Abramson, 1996; Cree, Hounsell, Christie, McCune, & Tett, 2009).

2.6.3 The future of higher education provision

It has not always been the role of universities to undertake both teaching and research (Anderson, 2006), and HE has continuously evolved to meet economic and political changes within national settings and the global knowledge economy (West, 2016). Considering the great changes that have occurred within the higher education sector throughout the writing of this thesis (2011–2017) it would be short-sighted to imagine that there will be stability any time soon. The changes to funding in English HE, moving from government grants to student fees, is influencing both the scale and extent of research, and student attitudes to their studies are also seen as evolving (Bunce, Baird, & Jones, 2016; Nixon, Scullion, & Hearn, 2016).

What does seem evident is that all political parties have promoted the role of CBHE within the HE landscape, and we may be nearing the political atmosphere of 1992, which saw inclusion of polytechnics within the university family, through the move towards colleges receiving foundation and full degree awarding powers (Exley, 2016). In addition the consequences of Brexit has yet to be realised. The status of international students has not yet been clarified, where their change in status may lead to an increase in fees for international students, making the UK a less desirable educational destination (Black, 2017).

2.7 Conclusion

The evidence discussed here outlines contradictory answers to the question of whether there is a relationship between research and teaching. Where some are convinced that no clear relationship exists (Feldman, 1987; Hattie & Marsh, 1996, 2004; Ramsden & Moses, 1992), the *Conventional Wisdom Model* (Hattie & Marsh, 1996) claims that there is a *belief* that teaching and research are positively related, both in England and beyond (Leisyte et al., 2009). Such a

belief in the relationship in the absence of strong empirical evidence suggests that the link is felt to be important to the profession (Hughes, 2005), and possibly says something more about the self-perception of university lecturers and management, than of an absolute necessity to be research-active (Durning & Jenkins, 2005).

Research supporting the teaching-research nexus is limited as factors cannot be measured in a way that would allow for equally valid comparisons of teaching and research, nor can the range of mediating variables be accounted for in any one study. In addition, the research discussed thus far has been related to traditional university provision. As CBHE tends to favour scholarly-activity over research-activity, there is limited research considering the teaching-research nexus in the CBHE context.

This thesis aims to explore how CBHE relates to the teaching-research nexus through the investigation of four research questions. As determined by the research questions the thesis considers how pre-1992 and post-1992 universities and CBHE position themselves within the market (Chapter 4), whether their positioning is reflected in the lecturers' beliefs and behaviours (Chapter 5), whether the teaching-research nexus is evident in the classroom (Chapter 6) and what the students' experiences and perceptions are of the nexus (Chapter 7).

Chapter 3

Research Methodology and Rationale

It was an important consideration in planning this research that the methods adopted were, as far as possible, those which have been previously employed in research into the teaching-research nexus. This adoption of standard methods enables effective comparisons to be made. This chapter details the sampling strategies and methodologies adopted to examine each research question, and ethical approval considerations.

3.1 Research framework

Research into the teaching-research nexus has changed over time in both aims and methods. Research throughout the late 1980s primarily consisted of empirical studies trying to establish whether there were statistical relationships between constructs relating to research and teaching, with inconclusive findings (Feldman, 1987; Hattie & Marsh, 1996; Ramsden & Moses, 1992). During the 1990s research maintained this focus but employed more qualitative methods through interviews with academic staff and managers about their beliefs and perceptions (Robertson & Bond, 2001; Rowland, 1996). It was not until the 21st century that student perceptions were sought (Robertson & Blackler, 2006), where the favoured method was surveys, with some qualitative research being done to understand their perceptions. Current research tends to be more focused on the application of the nexus and lived experience, with articles of an evaluative and case study nature (Bertolo, 2009; Buckley, 2011; Cherastidtham, Sonnemann, & Norton, 2013).

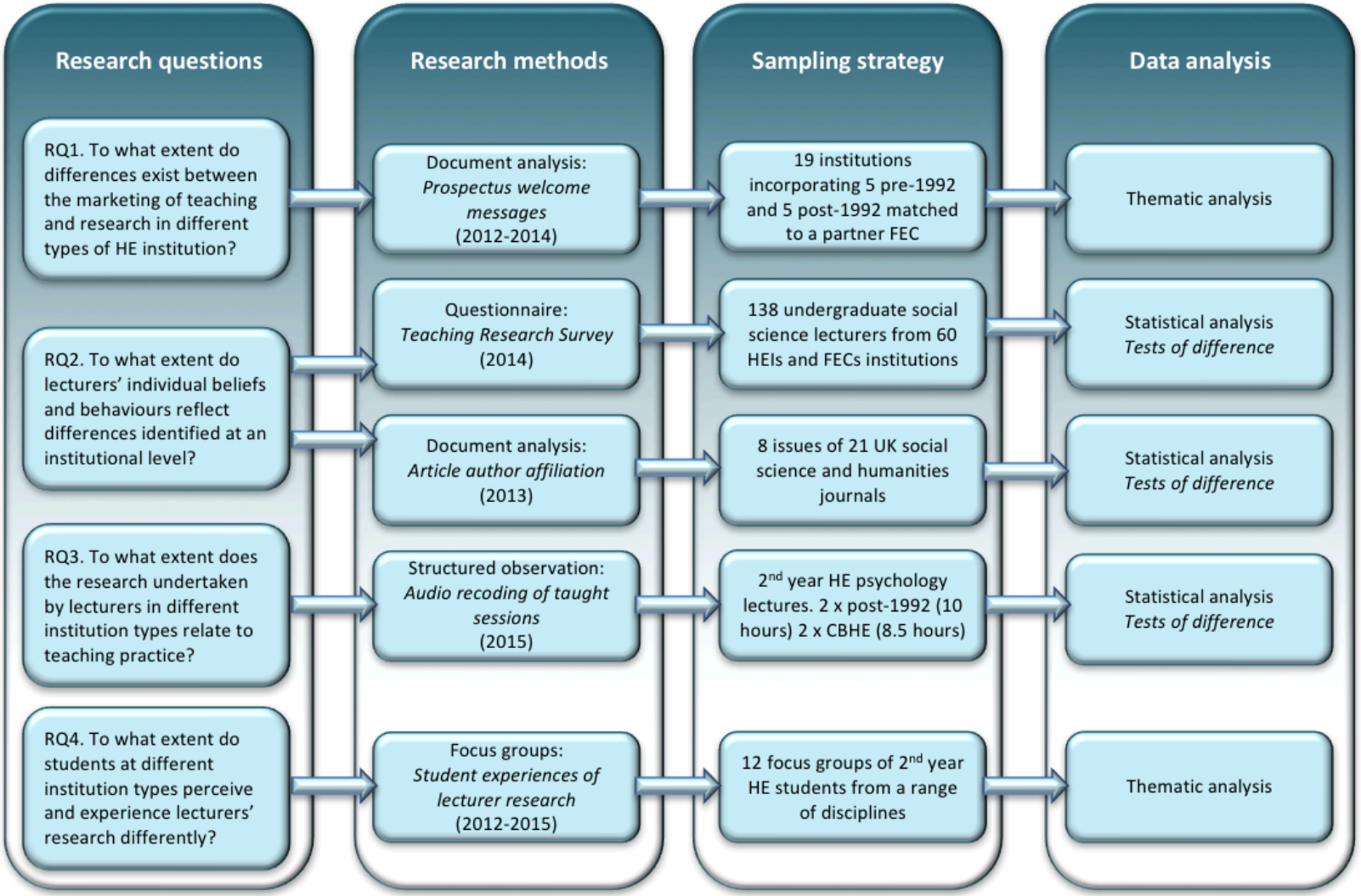

Figure 3.1 Overview of the research process

In summary, this study explores the links between research and teaching through the examination of four research questions to provide coverage at a range of scales; that of the institution, the department, the lecturer and the student. Following evaluation of the methodologies it was decided to utilise a multi-site and mixed methods approach (Figure 3.1). This enabled triangulation and increased construct validity (Cohen, Manion, & Morrison, 2007).

3.2 Sampling Strategy

It was important ensure that the accurate methods were employed to answer the diverse nature of the research questions. In the social sciences, there is typically a straddling of methodological approaches. For example, psychology research typically aims to identify patterns of behaviour through empirical methods, which they then aim to explain through more qualitative approaches. By using these complimentary techniques triangulation becomes possible, potentially increasing the validity of the findings.

3.2.1 Sampling strategy to identify institutional differences in higher education marketing

When undertaking document analysis it is important to identify the population from which the most representative sample can be taken to increase the credibility and authenticity (Cohen et al., 2007). In this case the target population was all English institutions that offered higher education courses. A sample was selected by identifying regions in England that included both a pre and post-1992 university in order to ensure there was no regional bias. The resultant sampling frame was reduced to five different regions incorporating a range of metropolitan, rural and coastal environments from the northeast, northwest, southeast, southwest and the midlands – a pre-1992 and post-1992 university being selected from each.

Having tied a pre and post-1992 university together geographically, a search was made of each university website in order to identify FECs with whom partnerships had been formed. Where a university had more than one college partnership, the 2012 HE prospectus of each

franchised college was downloaded and analysed, and the FEC that had the largest portfolio of courses was then selected as this larger student base may better reflect a stronger HE ethos.

3.2.2 Sampling strategy to examine lecturers' beliefs and behaviours with respect to the teaching-research nexus

The target population consisted of all lecturers employed at any English university or CBHE provider. Snowball sampling was applied through contact being made electronically to a male and female undergraduate psychology lecturer at each university and CBHE provider. The decision to focus on one discipline was made in order to make meaningful comparisons between the responses. Social sciences were chosen as they have been shown to have a more hybrid approach to integrating research into the learning experience (Robertson, 2007). Where the natural sciences' utilisation of empirical methods means that it is not easy to introduce research to the learning experience (Smeby, 1998), whereas the arts do not necessarily define research in terms of knowledge construction through traditional systematic processes. The discipline of psychology was therefore selected in order to make meaningful comparisons from within the social sciences.

3.2.3 Sampling strategy for observation of institutional differences in publication outputs

As the questionnaire responses were anonymous it was not possible to corroborate the actual publishing behaviour of this sample specifically, therefore patterns of publication were observed through a range of journals in order to establish whether the self-reported data represented actual publishing behaviour. Output averages of the three institution types were compared to the prevalence of authors affiliated to English HE institutions through quantitative analysis of a range of different journal types and levels.

3.2.4 Sampling strategy to explore student experiences of research-informed teaching

Observations of the undergraduate psychology lectures were undertaken to assess whether there were institutional differences in the experiences of students with respect to research-informed teaching. A social science was regarded as important as it reflected the data

collected thus far with respect to staff beliefs and behaviours. Psychology lectures were chosen as the analyst's familiarity with the discipline ensured that accurate differentiation could be made between different facets of the lectures observed. Second year lectures were chosen as it has been found that first year students have a limited exposure to research (Spronken-Smith, Mirosa, & Darrou, 2014), as lecturers may still be helping students get to grips with research concepts and skills, whereas third year students may be working towards personal research projects and have been shown to experience the nexus in a similar way to postgraduate students (Arnold, 2008; Durning & Jenkins, 2005; Taylor, 2008).

Observation was through audio recordings collected by students. Psychology lecturers at a range of institutions were contacted via email and asked for their assistance in recruiting students to make audio recordings of their subject lectures for one week. A week was chosen as it usually represents the full range of the learning activities normally experienced. No data were collected from pastoral or personal tutorial sessions as this was not deemed relevant to the topic and would have been invasive. Problems were encountered in circumventing the gate keeping of tutors, resulting in only two university data sets being collected. Two data sets were collected from CBHE psychology courses, a third was deemed unsuitable due their recent granting of university status.

3.2.5 Sampling strategy to establish students' awareness and experiences of lecturer research

The data were collected through focus groups, where the construction of the group is paramount to the success of the research. Groups may be homogenous in nature or a cross section of a specified population, but homogeneity does not necessarily lead to compatibility (Smithson, 2000; Wilkinson, 2004), indeed it is important to ensure that the criteria for group construction are relevant to the phenomena being explored. In this case, sampling was of homogenous groups, where all the participants within each focus group were from the same discipline in order for them to discuss their experiences in a more meaningful way.

Students were either approached via their tutors, or through the researcher approaching groups of students in university libraries and cafes. Again an appropriate sample was achieved from FECs and post-1992 universities, but it proved impossible to gain permission from any pre-1992 institution. Student focus groups were undertaken with psychology student to continue the coherent sampling strand throughout the study, but it was considered important to establish whether any observed patterns were evident across disciplines, or a feature solely of the social sciences. Efforts were therefore made to go beyond this group, and capture a range of disciplines to allow for comparisons to be made beyond the social sciences. An attempt was made to match disciplines between the colleges and universities. This ensured that meaningful comparisons could be made with respect to the students' experiences within the disciplines.

3.3 Research strategy: RQ1 - To what extent do differences exist between the marketing of teaching and research in different types of HE institutions?

In order to establish whether there were differences in institutional stances on research and teaching, an analysis of the welcome messages of a range of higher education institutions was undertaken as a proxy for their institutional ethos regarding these activities.

3.3.1 Design

Previous research investigating higher education branding has taken various methodological approaches with various respondents. Interviews with senior managers and administrators has demonstrated that universities embrace both institutional and departmental branding (Chapleo, 2007; Maringe, 2004). Alternatively, surveys of UK students found that they value the tangible benefits of attending that institution (Bennett & Ali-Choudhury, 2009), whereas international students, who represent 18% of the UK undergraduate market (UKCISA, 2016), were attracted by marketing that promotes the value of UK qualifications (Binsardi & Ekwulugo, 2003). These forms of questioning do not necessarily give an indication of the

institutional ethos, as managers' views on branding are not necessarily indicative of the messages being sent. Equally, students' views on institutional branding only reflect what they notice, and not what they ignore from the marketing.

As the purpose of this research was to capture the institutional stance, the focus was on the message sent, and not how it was received. This was achieved through document analysis of prospectus welcome messages written by institutional heads of various higher education institutions communicated to *prospective* students. Atkinson and Coffey (2004) claim that such public documentation is an ecologically valid method for understanding the construction of organisational social reality.

Document analysis is a set of procedures which allows inferences to be made about the sender, the message and the intended audience (Weber, 1990). Essential features of the document analysis process are that through systematic and objective assessment of the text the interpretations are reliable, replicable by others, and avoiding selectivity in interpretation (Krippendorff, 2004). Where document analysis differs from other data collection methods within the social sciences is that it is an indirect observation of human or institutional behaviour by making inferences through the objects produced at either a manifest or latent level. Its relative advantage over other data collection techniques is that the text is a product of real life situations, without the pressure of researcher expectations leading to socially desirable behaviours (Krippendorff, 2004).

Atkinson and Coffey (2004) endorse the analysis of documents produced by institutions to better understand organisations, or the social representation that they wish to portray. The importance of the document will be indicated by the authorship, or at least those who are credited with authorship (Atkinson & Coffey, 2004). In this case the message is endorsed by the Principal (in the case of the CBHEs), and the Vice Chancellor (in the case of universities). This text was chosen as these are the individuals in charge of leading the institution, therefore their vision should be encapsulated within the message. What could not

be ensured was the authenticity of the authorship, where it is entirely possible that the message was written by others, such as the marketing department, under direction (Atkinson & Coffey, 2004).

Another important consideration is who was the intended audience. Although the text may be read by anyone who has access to it, it will have been written based on an implied readership and have been designed based on their perceived needs and wants (Atkinson & Coffey, 2004). In this case the anticipated audience is prospective students, and the message focused on what they may be looking for in an institution of higher education. In order to assess how institutions situate themselves regarding the teaching-research nexus, themes relating to research and teaching were coded.

3.3.2 Sample

The 2012 sample included ten universities, but due to one of the pre-1992 universities not having a partnership arrangement with an FEC, the sample of colleges totalled nine (Table 3.1). The same sample was used for a period of three years in order to establish whether any changes had occurred. The website for each institution was accessed and the prospectus for the next academic year was downloaded digitally or ordered as a hardcopy via email. Where there was no access to a prospectus in any format the website welcome message attributed to the institutional head was analysed in lieu.

		Prospectus		
Year	**Institution type**	**Electronic**	**Hard copy**	**Website**
2012	**CBHE**	8	0	1
	Post-1992 university	2	1	2
	Pre-1992 university	2	2	1
2013	**CBHE**	8	0	1
	Post-1992 university	4	1	0
	Pre-1992 university	3	2	0
2014	**CBHE**	6	1	2
	Post-1992 university	4	1	0
	Pre-1992 university	4	1	0

Table 3.1 Annual access to institutional welcome messages

3.3.3 Prospectus data analysis

Thematic analysis is a form of qualitative analysis (Braun & Clarke, 2006), its purpose is to identify patterns or clusters in order to generate meaningful variables (Weber, 1990). To operationalize the variables the unit of measurement must be decided: be it at a word, concept or sentence level (Cohen et al., 2007). After several readings of the texts, the unit of measurement deemed as appropriate was at the level of concept, where research and teaching related reasons to attend the institution were coded (Braun & Clarke, 2006). Having defined the terms, coding was undertaken where each unit was considered and assigned to a group, where each data piece is referred to as a *data extract* (Braun & Clarke, 2006).

The codes were then organised into themes (Cohen et al., 2007). It is important that themes are reviewed at a data item and data set level to ensure that they map meaningfully across (Braun & Clarke, 2006). From reviewing the codes, four themes relating to the teaching-research nexus were generated (see section 4.3.1).

Having analysed all the texts, a quantitative comparison was made between the three different institution types (Cohen et al., 2007). Summary tables of the analysis can be seen in Appendix 3.1 (CBHE), Appendix 3.2 (Post-1992 universities) and Appendix 3.3 (Post-1992 universities). The quantitative analyses and interpretation of institutional differences in stances on the teaching-research nexus can be seen in section 4.3.

3.3.4 Evaluation of the method

Clearly, the degree of generalisation which can be made from such a sample is limited. However, it is possible to use the data collected to theorise about the possible wider applicability of the findings about the stance of HE institutions regarding the teaching-research nexus (Hammersley, 1990). It is important to consider that texts may not represent reality and may be incomplete or biased, which may affect the reliability of any inferences drawn (Cohen et al., 2007). They may only be judged as documents that present the institution in the way

that the institutions themselves choose, and as such it is not possible to state that any findings reflect the experiences of the students.

Issues of reliability may also emerge at the point of analysis where the subjective reviewing of the text may lead to over-interpretation, or may lose some of its nuanced detail through the choice of larger unit levels of analysis (Cohen et al., 2007). These issues were addressed by reviewing codes as each new data source was examined to ensure that they were meaningful and applicable. Earlier texts were referred back to in order to ensure that the approach was maintained throughout (Braun & Clarke, 2006).

3.4 Research Strategy: RQ2 - To what extent do lecturers' individual beliefs and behaviours reflect differences identified at an institutional level?

In order to establish whether lecturers' beliefs were representative of the institutional ethos, lecturers were surveyed as to their teaching and research activity and their beliefs about the nexus.

3.4.1 Design

Although a plethora of research has been undertaken investigating the identity of HE lecturers across the sector (section 5.2), a sectoral comparison of workloads and role-related activities has not been undertaken. Research focusing on academic identity has been carried out through interviews establishing that lecturer identity is more complex than solely their job title (Clegg, 2008), but that identify is also affected by the type of institution that the lecturer is employed in (Gale, Turner, & McKenzie, 2011). Research using questionnaires has suggested that those working in CBHE utilise more student-centred approaches than those traditionally associated with HE (Burkill, Dyer, & Stone, 2008).

In this case a quantitative method was chosen as it allowed for statistical comparisons about the teaching and research roles between institution types, with the inclusion of a

psychometric test to assess lecturers' perceptions about these roles and how they experience the teaching-research nexus.

To increase access to participants and response rates, an electronic platform was used to distribute the survey. Embedding the link in an email allowed easy access to the survey which respondents could complete at their leisure. Respondents were asked to forward the email to colleagues to increase the sample size (Jones, Murphy, Edwards, & James, 2008).

3.4.2 Survey design

In order to assess how any differences in teaching and research activity undertaken may manifest itself in different types of institution, the Teaching Research Survey was developed which was divided into three sections (Appendix 3.4). The first section collected demographic data such as age and gender, and employment-related data such as contract type and time in the job.

The second section sought to identify how forms of academic activity related to lecturers' role through an inventory of role-related activities.

Teaching: Participants were to estimate "on average" how many hours they spent in contact with students or undertaking a range of teaching-related activities per week, in both higher and further education roles.

Research: Unlike the timetabled measure of teaching, it was not deemed reliable to ask participants to recall retrospectively how long they spent conducting research activities, so this element was measured by the number of activities rather than time spent undertaking such tasks (Feldman, 1987). Respondents were asked to consider activities undertaken during the previous three years. This time frame was chosen as it would show contemporary working practices, and give a fair representation of the range of activities involved in undertaking a research project, therefore more likely to capture a representative range of activities from bidding for funding (successful or otherwise), then data collection and analysis, through to dissemination through publication or conferences. This approach to a three year period was

chosen over *career output* as a measure, as this allows for effective comparisons to be made between early career researchers and those who have been undertaking research for many years (Feldman, 1987).

The final section was a psychometric test designed to identify lecturers' perceptions of the teaching-research nexus, and was a modified version of the evaluative aspects of Marsh and Hattie's (2002) Teaching and Research Survey (TRS). A psychometric test is presented as a set of items, which stand as proxies for the unobservable behaviour, as no manifest demonstration of the construct is available. From the resultant numerical value, inferences are made about each participants' thoughts, traits or attributes based on the specific construct under investigation (Raykov & Marcoulides, 2011).

The TRS was chosen as it directly assessed higher education lecturers' self-perceptions of their role. The test is divided into three subsections; those relating to the respondent's role as a teacher (six items), their role as a researcher, if appropriate, (seven items) and their perception of the interaction of the two functions through the teaching-research nexus (fifteen items). The subsections considering their role as teacher and researcher commenced with an item asking them to assess their ability in each role, by comparison to others in their discipline, through a 5-point scale, anchored at 1 (below average) and 5 (above average). The remainder of the items in these two subsections assessed the potential mediators as identified by Marsh and Hattie (2002) where all items are responded to using a 5-point scale, where 1 indicates strong disagreement and 5 strong agreement. The constructs measured are satisfaction with the role (one item for teaching and two items for research); and primary role (one item).

The final subsection assesses the respondents' perception of the teaching-research nexus, employing the same response scale as the role-related questions. Here four perceptions are investigated; the constraints of research on teaching and vice versa (three items on each) and the nexus of teaching on research (five items) and vice versa. The TRS has reached an

acceptable level of internal reliability, with the constructs of extrinsic rewards for roles of teaching and research reaching levels of r=.85 and .72 respectively. The constraints of research on teaching and vice versa achieved level of reliability of r=.64 and .74 respectively, and the nexus of teaching on research, where r=.79, and vice versa r=.70 (Marsh & Hattie, 2002).

3.4.3 Respondent sample

Emails with survey links were sent to 271 lecturers, a total of 138 lecturers responded, a 51% response rate, where 118 respondents completed all elements of the questionnaire producing a 44% response rate (Table 3.2).

	Number of respondents (%)	Number of institutions	Mean number of respondents per institution
CBHE	92 (67)	31	2.9
Post-1992	25 (18)	13	1.5
Pre-1992	21 (15)	16	1.3

Table 3.2 Institutional responses (N=138)

There was an equal gender balance between the different types of institution (x^2 = .92, df = 2, p = .63), and there were no significant institution-type differences in the age of the respondents ($F_{(2,131)}$ = 1.05, p = .53) (Table 3.3).

		Age		Gender distribution (%)	
	N	M	SD	Male	Female
CBHE	92	45.38	10.1	53	47
Post-1992	25	46.88	9.7	44	56
Pre-1992	21	42.67	8.8	47	43
Total	*138*	*45.22*	*9.8*	*52*	*48*

Table 3.3 Demographic details of sample

3.4.4 Survey data analysis

SPSS was used to undertake quantitative comparisons of institution type differences, where Chi-squared tests for goodness of fit were applied to nominal level data, and between-subject ANOVAs were applied to parametric data, with post hoc unrelated t-tests applied to establish differences between specified institution types. Within institution type differences between

views on teaching and research were examined through related t-tests, and correlations of measures through Spearman's Rho. The comparison of institutional publications can be seen in section 5.3.3.

3.4.5 Evaluation of the method

The Teaching Research Survey was used as it had shown to be reliable and valid in previous research in this area. One issue that had not been previously noted, probably due to its exclusive use with university staff, was how those on teaching-only contracts interpreted the questions. It was assumed that those who claimed not to be research-active would not answer the questions regarding their research abilities, but in most cases these sections were completed by all respondents. This may be for several reasons. Firstly, respondents may have interpreted the questions about research as to how research-activity *may* affect their identity *if* they were given the time to undertake research projects. Alternatively, they may have interpreted research to mean keeping professionally updated, more in line with the concept of scholarship. Such vagueness is less likely to occur in the university lecturers' responses, as research in this context is a set of clearly defined activities related to the role. An additional limitation was the comparatively low response rate, especially from the pre-1992 institutions.

3.5 Research strategy: RQ2 - To what extent do lecturers' individual behaviours reflect the differences identified at an institutional level?

3.5.1 Design

Having established what teaching and research activities lecturers claim to do, it was important to validate this by more objective means of assessment. Self-reported methods are open to misreporting for a range of reasons, so a proxy was required. Therefore an analysis of the frequency and type of publishing behaviour of those employed at the different types of HE institution were examined through the content analysis of a sample of journals.

3.5.2 Sampling frame

A sample of twenty-one academic journals publishing research in the social sciences and humanities was selected as these disciplines reflected the sample who had responded to the survey component. Journals were selected to represent a range of publication qualities; subject and ranking (Table 3.4). From each of the selected publications, data were analysed for the eight issues prior to October 2013. Items included in the coding were *original articles, literature reviews, educational resources* and *essays* as they were considered to develop the readers' understanding through original thought. Items excluded were *editorials* and *introductions* as they tend to be written by the editor thereby preventing a comparable institutional analysis. *Book reviews* were also excluded as they were not considered to be reporting on new research.

Rank	Pedagogic	Discipline-base pedagogic	Discipline-specific
A	Higher Education	Journal of Research in Reading Sport, Education and Society	British Journal of Sociology of Education Journal of Cognitive Psychology
B	Active Learning in Higher Education Journal of Further and Higher Education Innovations in Education and Teaching International Research in Post-Compulsory Education	Journal of Adventure Education & Outdoor Learning Journal of Geography in Higher Education Social Work Education	Journal of Gender Studies Social and Cultural Geography The Quarterly Journal of Experimental Psychology
C	The International Journal of Management Education	Journal of Hospitality, Leisure, Sport & Tourism Education Research in Science & Technological Education	Qualitative Research in Psychology Social Politics

Table 3.4 Sample of journals by publication type and rank

3.5.3 Analysis of journal authorship

Each journal and article was coded on each of the following criteria; publication type, publication quality and the affiliation of authors.

- Publication type: Those sampled were *pedagogic*, *discipline-specific* and *discipline-based pedagogic*. The *pedagogic* publications were selected if their scope was identified as being focused on issues of teaching and learning practice in the post-compulsory education sector; thereby including issues relating both to further and higher education. *Discipline-specific* journals were chosen as this represents the cutting-edge research within cognate disciplines, and were defined as those publications focused on the advancement of knowledge within that discipline. The *discipline-based pedagogic publications* were chosen as an integration between the two, and were included if the journal's statement of scope indicated a focus on educational issues that related to a specified discipline.

- Publication quality: Journal quality was assessed based on the Australian Research Council's journal quality indicator for 2010 (ARC, 2009). The ranks chosen were A, B and C, where A-ranked journals were deemed to be "of very high quality" and publishing in such journals would "enhance the author's standing" indicating that they "have real engagement with the global research community". The B-ranked journals were considered "solid, though not outstanding" with "only a few papers of very high quality". The C-ranked journals were those that did not meet the criteria for the above (ARC, 2009).

- Affiliation of authors: The institution that each author was affiliated to at the time of publication was coded. The categories under investigation were affiliation to a pre-1992 university, a post-1992 university or an FEC. Where the article was a collaboration, the proportion of affiliation that each cited author held was calculated, where each author was treated as an equal contributor. This method allowed for an

examination of collaborative work between institution types at a national and international level.

3.6 Research Strategy: RQ3 – To what extent does the research undertaken by lecturers in different institution types relate to teaching practice?

In order to explore how the teaching-research nexus manifests itself within the classroom, evidence was gathered from the students' direct experiences through structured observations. Retrospective reporting from either the lecturer or from students would not necessarily generate data that reflects reality as memory often limits accuracy (Cotton, Stokes, & Cotton, 2010).

3.6.1 Design

Much of the research previously undertaken in this area relates to observations in primary and secondary school classroom settings, and as such is not necessarily transferable to the HE learning environment. To examine the activities being undertaken within the taught session, Lammers and Murphy's (2002) simple coding schedule was adapted, which assessed how long students spent in different types of activity within the taught session.

The purpose of the observations for this research was to gather first-hand information of phenomena in the classroom, through students' direct experience, with the intention of describing or explaining behaviour within that context (Malderez, 2003). The term in itself may be misleading as although the method is referred to as *observation* suggesting what can be *seen*, in some circumstances data may only be auditory with no visual data collected (Malderez, 2003), as in this research. The procedure allows for a direct and unmediated experience (Morra-Imas & Rist, 2009), which at its most simplistic level allows the observer to describe behaviours, or show interactions, and to draw out more complex inferences based on these observed patterns (Malderez, 2003).

Observational data can be gathered in a range of formats. Although video recording captures the event in its entirety (Cotton et al., 2010) the lecturers and students used in the study may fear that the footage could be used in a negative manner or just be uncomfortable about being captured on film (Robertson, 1982). Audio-recording the verbal interactions was chosen as it was deemed sufficient to establish what activity is going on in the class, and considered less obtrusive than video filming (Cohen et al., 2007).

3.6.2 Teaching sessions sampled

Recordings were made by students at two CBHE institutions and at two post-1992 universities, but no recordings were obtained from pre-1992 universities. The students recorded all of their contact time (including lectures, laboratory classes and workshops) for the duration of one week between November and March during 2012 and 2015. A week was chosen as it usually represents a full range of the learning activities normally experienced. No data were collected from pastoral or personal tutorial sessions as this was not deemed relevant to the topic and would have been invasive.

3.6.3 Procedure

Psychology lecturers were approached at thirty institutions with a request for assistance from their second year students with the recording of data, students being offered book tokens for assisting with the data collection. Data collection was undertaken by a student enrolled at the participating institution who met the sampling criteria. In this case the role of participant-as-observer was adopted, as the data was being collected by students of that teaching group, and therefore was a member of the group (Gold, 1958). Essentially a covert role was being taken in that there was no need to inform other class members about the recording, as it is an activity that many students undertake to help with their studies. This helped ensure that no participant roles were adopted and that the behaviour was representative of the normal lectures experienced by the students. The students were asked to audio-record all of their learning experiences within a week of their second year. No other information regarding the

observed sessions were taken, except the institution type. The recordings were sent electronically to the researcher for analysis.

3.6.4 Observational assessment of the teaching-research nexus

Previous approaches to categorising the teaching-research nexus include the most frequently cited model developed by Healey (2005) (Figure 3.2), which proposes a basis for the consideration of curriculum design, including how the curriculum is translated into the individual learning experiences.

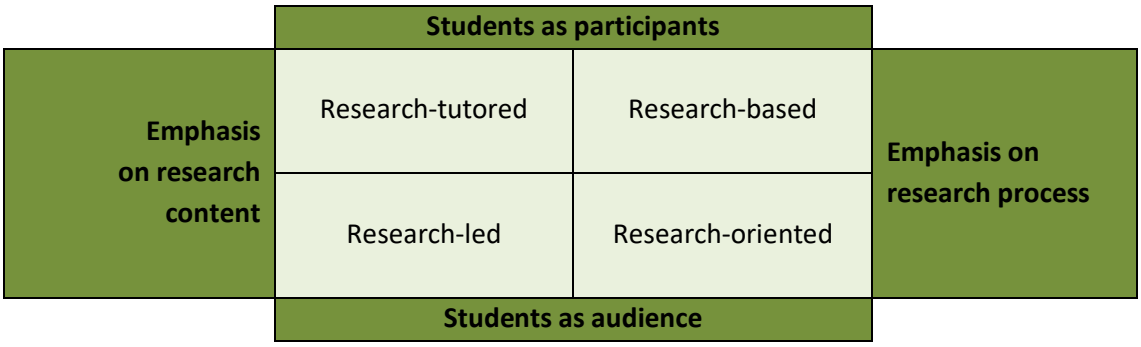

Figure 3.2 Healey's (2005) model

Through the model Healey suggests that student activity is an important feature of the learning process. Although there is a consideration of student activity no examination is made as to how the interaction occurs. Healey's model was adapted for this research to create an observation tool, the *Research in Teaching Assessment Matrix* (Figure 3.3).

The proposed tool extends Healey's brief two-dimensional model into an all-encompassing description of the taught experience. Healey's first dimension focuses on the *content* being delivered. The extended matrix approach allows for a more granular disaggregation of the session content, to include periods of time where research is not being addressed. This content includes theory, application or policy (TAP). The supporting research (SR) category reflecting Brew's (2006) *presenting research to students* interpretation of research-informed teaching, whereas the research methods (RM) category reflecting her

learning through research interpretation (see section 6.2.2 for a discussion of research-informed teaching). Healey's second dimension is further extended from the inclusion of passive and active states, to include features of interactivity. The interactive component is divided into two level of interaction; *lecturer-student* or *student group* interaction.

	Theory, application or policy (TAP)	Supporting research (SR)	Research methods (RM)
Group interaction (G)	**G-TAP** Group task with a focus on theory, application or policy A group activity or seminar to critique a theory, application or policy	**G-SR** Group task with a focus on how research supports a theory, application or policy A group activity to present or evaluate research that supports a theory, application or policy	**G-RM** Group task using research methods, such as design, data analysis or research skills A group activity to design a study, collect, analyse, interpret or present data
Lecturer interaction (L)	**L-TAP** Discussion between student and lecturer regarding theory, application or policy Questioning the class on theory, application or policy	**L-SR** Discussion between student and lecturer regarding how research as been used to support theory, application or policy Questioning the class as to how evidence to support theory	**L-RM** Discussion between student and lecturer regarding research methods, such as design, data analysis or research skills Questioning the class regarding issues of research design or analysis
Active (A)	**A-TAP** Individual task with a focus on theory, application or policy Reading or critiquing a theory, application or policy	**A-SR** Individual task with a focus on how research supports a theory, application or policy Reading or critiquing evidence used to support theory, application or policy A	**A-RM** Individual task using research methods, such as design, data analysis or research skills Designing or implementing research design or data analysis B
Passive (P)	**P-TAP** Students being instructed on theory, application or policy Theory lecture	**P-SR** Students being instructed on how research has been used to support theory, application or policy Theory lecture C	**P-RM** Students being instructed on research design or data analysis Research methods lecture D

Figure 3.3 The Research in Teaching Assessment Matrix

The Research in Teaching Assessment Matrix has extended Healey's four categories to twelve, in order to make a detailed assessments of taught sessions. Section A corresponding to Healey's *Research Tutored*, B corresponding to *Research Based*, C to *Research Led* and D to *Research Oriented*. Comparisons between institution types would identify whether institutions that are not overtly research-active offer a similar or different degree of research-informed provision than institutions with a more established research culture.

3.6.5 Analysis of observed teaching sessions

The systematic approach to data analysis applied in this study was *event sampling,* which is a complete form of data collection where there is a continuous record of the behaviours that have been observed (Cohen et al., 2007). Fassnacht (1982) argues that technically speaking this is not a form of *sampling*, indeed it is a more complete form of data collection as it allows both the duration of behaviours to be measured as well as the frequency.

The audio-recordings were then reviewed, and timings for each activity were logged in seconds. The timings for each for the individual activities were summed for each institution type to provide up to twelve final values corresponding to the categories defined by the Research in Teaching Assessment Matrix. Comparison between the institution types were made through calculating the proportion of time spent in each of the twelve categories, through within-subjects ANOVAs calculated using SPSS.

For a more detailed examination of the behaviours being coded, definitions and examples of these behaviours can be seen in Appendix 3.5 (Theory, Application and Policy), Appendix 3.6 (Supporting Research) and Appendix 3.7 (Research Methods).

3.6.6 Evaluation of the Method

The more structured an approach that is taken the more reliable the results may be deemed as the process is open to scrutiny, but it could be argued that imposing a structure on to the event is to ignore other vital information, potentially distorting reality (Jupp, 2006). All of the events within the taught sessions were coded, with the exception of housekeeping issues

which did not relate to the teaching-research nexus, suggesting the structure was inclusive of all relevant data.

Collection of classroom data was problematic for several reasons. As the chosen discipline was psychology there were limited opportunities for data collection from CBHE as the vocational nature of the sector means that there are relatively few psychology courses offered at associate degree level. One of the colleges selected then received university status, so was deemed to be inappropriate for the study and therefore excluded. There are many psychology degrees offered through both pre and post-1992 universities, but although both email and telephone contact was made with over thirty providers, there was resistance to the requests for student assistance in the collection of data. Where data was collected from the post-1992 universities there was a pre-existing relationship with a course leader and a student at the two institutions. With respect to pre-1992 universities, my requests and those made by my supervisory team were unsuccessful. The reason for such resistance may have been due to the potentially controversial use of audio-recording lectures. Therefore the final data set was smaller than planned, which impacts upon the breadth and representativeness of the findings.

3.7 Research strategy: RQ4. To what extent do students at different institution types perceive and experience lecturers' research differently?

The classroom observations offer an example of what research activities are experienced within taught sessions, but do not indicate what research experiences the students may have outside of the classroom, or their opinion of these. Therefore, in order to establish students' awareness and experiences of their lecturers' research activity, a focus group approach was adopted.

3.7.1 Design

Applying a survey framework, such as that developed by Short, Healey, and Romer (2010), allows for meaningful comparisons between findings, but the use of a questionnaire which

does not allow the students to differentiate between their different lecturers posed a threat to the meaningfulness of their findings. Even if all their lecturers integrated research into their teaching it does not necessarily mean that they will do so with equal and positive effect. Alternative approaches taken, which address some of these shortfalls, are through the use of case studies, such as the review of students' experiences of research at the University of Gloucester (Healey, Jordan, Pell, & Short, 2010), where a combination of questionnaires (Healey, Jordan, & Short, 2002) and focus groups were employed to add breadth and depth to the findings.

In order to examine student opinions and experiences in sufficient depth a qualitative approach was adopted to answer this research question. As the learning experience is a group activity it seemed fitting to experience student feedback in groups, similar to that undertaken by Lindsay, Breen, and Jenkins (2002), although in this research the quality of the data was retained, rather than quantifying the responses as was done in their study.

Focus groups are small groups which are constructed by the researcher to discuss a specified topic or issue (Wilkinson, 2004). They differ from one-to-one interviews as it is the conversation between the participants, rather than the individual responses to the facilitator's questions, that are of the essence (Cohen et al., 2007). Focus groups were therefore chosen as the conversational nature of the method encourages a range of explanations to be explored. The process involves a schedule of questions being posed to the group by a moderator or facilitator whose primary role is to establish a conversation where all voices are heard (Arksey & Knight, 1999). The purpose of a focus group is to realise a collective view through the interactive nature of the technique (Cohen et al., 2007). It is this social constructionist approach that makes focus groups ideal for developing ideas or generating hypotheses, and establishing the attitudes, values and opinions within and between groups (Breen, 2006).

3.7.2 Focus group schedule

The schedule developed was based on the questionnaire employed by Healey et al. (2002), where their closed questions were converted into open questions and prompts for discussion. Prior to piloting there were three sections to the schedule (Appendix 3.8). The first section explored the students' *awareness* of research undertaken at the institution and by their lecturers, including questions about awareness of lecturers undertaking further qualifications and funded research activity. This allowed for the students' perceptions of their lecturers' currency in their chosen field. The second section explored students' *experience* of lecturer research and their level of participation, be it discussions at the design stage, assisting in data collection or analysis, or being a participant. The final section aimed to understand how they felt their experience, or lack of thereof, had affected their education.

After piloting it was noticed that students differed in their definition of research, so a question was added to the beginning of the schedule asking students to consider, in silence, their personal definition of research, and then to share this with the group so the range of views could be discussed. After the discussion a working definition of research was given to the group, defining research as "the process of collecting data in order to answer a research question", and it was stated that this was to be used throughout the rest of the focus group discussion.

3.7.3 Focus group sample

The courses were then matched between institution types in order achieve comparable groups (Table 3.5).

	University courses	College courses
Computing	BSc Computing	FdSc Computer Technology
Biology	BSc Biological Sciences	FdSc Biomedical Studies
Psychological	BSc Psychology	HND Applied Psychology FdA Counselling Studies
Health practitioners	BDs Dental Surgery	FdSc Healthcare Practice
Criminal justice	BSc Criminology and Criminal Justice Studies with Psychology	FdA Public Services

Table 3.5 Cross-institutional comparison groups

The focus groups varied in size from two to six participants, dependent on how many volunteered from each class, and to prevent the moderation of groups becoming unwieldly with larger group sizes (Cohen et al., 2007) (Table 3.6). In one case it was necessary to undertake a one-to-one interview, due to non-attendance. A total of seven focus groups were held with thirty CBHE students with an average age of 32.9 years (SD = 9.8) from three different colleges. Five focus groups were held in two post-1992 universities with ten university students where the average age was 28 years old (SD = 12.3).

Institution	Course	Gender	N	N
CBHE	Applied Psychology	Male	1	4
		Female	3	
	Applied Psychology	Male	1	5
		Female	4	
	Bioscience	Male	2	3
		Female	1	
	Computer Science	Male	3	3
		Female	0	
	Counselling	Male	1	5
		Female	4	
	Health Care Practice	Male	0	6
		Female	6	
	Public Services	Male	2	4
		Female	2	
Post-1992 university	Biological Sciences	Male	0	2
		Female	2	
	Computing	Male	0	2
		Female	2	
	Dentistry	Male	0	2
		Female	2	
	Psychology	Male	1	3
		Female	2	
	Criminology & Criminal Justice	Male	0	1
		Female	1	

Table 3.6 Demographics of focus group participants

The age of the CBHE interviewees reflects the presence of mature learners that CBHE typically attracts, but the interviewees from the university sector does not represent their average age group (Universities UK, 2016). This suggests that those volunteering to become participants from the post-1992 universities may not reflect that student body. The samples achieved in the CBHE focus groups tended to represent the gender balance of these disciplines

within the UK with the exception of Biosciences where sixty per cent of students in 2011 were female. The university sample was representative in all cases except Computer Science which is predominantly studied by males (Universites UK, 2012).

3.7.4 Procedure

Participants were welcomed and given an overview of the project, before the ground rules of the session were laid out (Breen, 2006; Wilkinson, 2004). This was to ensure that all participants were comfortable enough to express their views (Parker & Tritter, 2006), and remaining on-topic whilst allowing the group to integrate their own thoughts (Cohen et al., 2007).

All focus groups started with the open discussion of how they individually defined the term *research*. The topics were then brought in at points where the conversation ceased and further prompting was not generating new information. To manage the issues of dominance within the focus groups the facilitator addressed questions to specific individuals if it was felt that they were not having their voices heard.

It is not just the interaction between participants that needs consideration; the facilitator also plays a social role, and who the facilitator is may lead to responses based on participants' prejudicial beliefs as part of the social context (Smithson, 2000). The same facilitator was used for each focus group, and ensured that she kept her input to a minimum to allow the group to own the conversation. The focus groups varied in length (CBHE average time 16 minutes, post-1992 university length time 14 minutes). The duration being dependent often on group size, the more respondents the longer the focus group.

3.7.5 Analysis of focus group transcripts

Following standard practice in focus group analysis, points were born in mind throughout were the need for systematic analysis considering the extensiveness, intensity and specificity of emergent themes (Breen, 2006). Such patterns can be used to produce a comprehensive summary which can answer specified questions at an individual and group level (Wilkinson,

2004). Data were analysed using thematic analysis as discussed in section 3.2.3, where all items were coded at the unit level of concept, and subsequently themed.

3.7.6 Evaluation of the data

The intention of this phase of data collection was to listen to the conversations that evolved from the questions posed about the teaching-research nexus. Due to limited access to students from universities through resistance from course leaders who were gatekeepers to potential participants, and poor attendance by some participants at pre-arranged focus groups, some of the groups were smaller than initially planned, in one case resulting in a one-to-one interview. Although this may have reduced the breadth of the conversation in this instance, it was interesting to note that interviewee was fully engaged in the topic and a stimulating and diverse conversation emerged.

A limitation of the data that was collected from my own institution may be its trustworthiness because some of the respondents had been in my class at some time. This may have compromised their ability to be as honest as they might have liked.

3.8 Ethical Considerations

The University of Plymouth Faculty of Education Ethical Approval Board granted ethical clearance for the study in May 2012 for those aspects involving human participants (Appendix 3.9). The investigations into the institutions' ethos and the observation of academics' publishing behaviour did not require ethical clearance as both employed a secondary research approach using data existing in the public domain.

The primary concern throughout the data collection was the anonymity of those involved. The electronic platform used for the Teaching Research Survey ensured that no connections could be made between the analyst and any of the respondents or institutions. This point was highlighted in the accompanying information sheet (Appendix 3.10). The most

challenging research issue was the anonymity in audio-recording of lectures and workshops. Data were collected from four institutions, none of which are named, and activities that occurred within the classroom are aggregated for the week, therefore individual lecturers approaches are not identified, as emphasised in the Information and Consent Sheet (Appendix 3.11). The focus groups with undergraduate students also required anonymity. Although the students' course level and disciplines have been reported to allow for comparisons, the institutions have not been named.

There are also ethical issues that are specific to focus groups regarding the concept of confidentiality. Although the facilitator can request that everything that occurs within the interview remains confidential, this cannot be guaranteed (Parker & Tritter, 2006), it remains the responsibility of all who took part. To manage this aspect all participants were asked to respect the privacy of their classmates, a point reiterated in the Information and Consent sheet (Appendix 3.11).

Another ethical issue that requires consideration is the role of the researcher in the focus group and how their presence may affect the contributions and confidence of those involved. Three methods of recruitment were used. The first was a request to students tutored by the researcher. This approach may introduce bias as the relationship between facilitator and focus group will be different from that where the interviewer is unknown. The pre-existing relationship may have affected responses and encouraged contributions to suit the researcher's expectations. In an aim to reduce any such bias the researcher made it absolutely clear that the opportunity to engage in the focus group was entirely optional. Those that did partake were well known to the researcher, with whom there was a positive and honest working relationship. Although this does not ensure that the participants expressed their true feelings, the responses and dispositions of those involved were typical of their normal behaviour. Although informed consent was received it may be argued that the request from their tutor may have reduced their ability decline the request.

The second method used to recruitment focus group members that were not known to the researcher, was through requests from their tutor. This method generated groups of students who were very interested in the process and engaged deeply in the discussions. In this case there was no pre-existing relationship between facilitator and focus group members, but what could not be guaranteed was that there was no coercion to take part. Their tutors were not present at the point of discussion therefore allowing them the freedom to be honest, and assurances were given that all responses would be anonymised. The final approach used involved approaching of students in cafes and libraries. Although this method may have reduced some of the potential participant roles of the previous methods, their lack of preparation to take part seemed to lead to a more superficial engagement with the process. In essence, these participants provided shorter answers and there was less interaction between group members.

These experiences suggest that there is no ideal method of focus group construction, just a variety of levels of interaction based on perceptions of the relationship and possible social hierarchy between those involved. When selecting the methods of data collection consideration was therefore made as to how to minimise such effects.

Due consideration was given in the planning and implementation phase to the welfare of participants, where all methods were assessed for potential impact on individuals. To ensure that the forms of questioning were not contentious, previous research tools were applied, such as the Teaching Research Survey and modifying the survey to create the focus group interview schedule. It was also important to explain to the participants prior to the focus groups that the discussions would be audio-recorded, as this may be a source of anxiety to some participants (Breen, 2006). At all stages of primary data collection it was made clear to the participants that they could withdraw from the research at any point and have their data destroyed. No participant requested this course of action. All participants were debriefed at the end of the process, allowing them to reflect on their involvement, thus providing

confidence that participants were happy to have their data included in the project. Where further interest was shown, project summaries were forwarded to these participants.

3.9 Conclusion

This thesis has adopted standard approaches to data collection and analysis to make the results comparable to previous research. The use of the Teaching Research Survey allows for the aspects of English university and CBHE lecturers' teaching and research activities and attitudes to be compared. In addition, the modification of Short et al. (2010) questionnaire to form an interview schedule allowed for comparison of student awareness and experiences of institutional research activity.

One unique outcome of the research has been the production of the Research in Teaching Assessment Matrix (Figure 3.3) which has enabled a deeper analysis of classroom activities than that previously developed by Lammers and Murphy (2002).

Chapter 4

An Exploration of Differences in Marketing of Higher Education

4.1 Introduction

In the first two decades of the 21st century policy changes, increased tuition fees and lifting of the student numbers cap, have led to the increased marketisation of HE, which impacts upon how institutions compete for students. As the different institution types appeal to different types of student, these differences may be evident through their institutional branding. As the head of an institution, it is fair to assume that any message given to prospective students reflects their institutional mission. This chapter therefore explores whether there are sectoral differences in how HE providers present teaching and research to their potential markets.

This chapter commences with a brief examination of the literature on the branding of higher education. In order to establish *to what extent differences exist between the approaches to marketing of teaching and research in different types of HE institution,* content analysis of Principal and Vice Chancellor welcome messages from prospectus of five pre-1992 universities, five post-1992 universities and nine FECs over a three year period was undertaken. Results are reported in section 4.3.

4.2 REVIEW OF LITERATURE

4.2.1 The marketisation of HE

Recent changes in English higher education policy have led to increased competition between an expanding field of higher education providers, resulting in such providers taking on approaches normally reserved for the for-profit organisations. Such changes have left some feeling that the marketing of HE is problematic (Hemsley-Brown, 2011) as education should not be seen as a product for purchase, therefore a client approach may be more appropriate (Coates, 1998). The client is seen to have needs and the educational institution is contracted to satisfy those needs, suggesting an ongoing relationship rather than the marketing just reflecting the point of sale.

4.2.2 Communicating effectively with the audience

Effective organizational communication – conveying meaning from sender to receiver - is a key part of marketing, and depends upon a variety of interlinked elements (Chandler, 2007). Using a model of interpersonal communication offered by Huczynski and Buchanan (2007) it is clear that effective communication requires a transmitter (in this case the educational institution), who encodes the message, which then travels through communication channels, such as websites and the prospectus, to the receiver (in this case, the prospective students and parents), who decode it. During both encoding and decoding, perceptual filters and 'noise' can distort the meaning of the message. Such interference could be at a macro level, for example media stories that affect how students interpret the message. Equally interpretation can be affected by micro factors, such as individual preconceptions. Understanding the receivers' wants and needs is therefore very important in this process, and this is somewhat dependent upon the student body and parents to whom the institution is trying to appeal.

4.2.3 Branding of higher education

In order to promote the institution in line with the views of the internal stakeholders, marketing techniques are utilised to create *brand knowledge*, which Wilson and Elliot (2016, p.

3058) define as the "factual, objective essence" of the brand. Successful marketing will lead to consistency between brand knowledge and *brand meaning,* which is the external stakeholders' interpretations of such message based on the "names, images associations and cognitions in memory" (Wilson & Elliot, 2016, p. 3058). Any gaps between the two creates communication inconsistency, where the students do not experience what they expected. In order to reduce any such inconsistency between knowledge and meaning, semiotics may be applied. Semiotics is the understanding of how communication occurs through shared cultural symbols, be that text, image or sound, in order to transfer meaning (Lawes, 2002). In the case of English HE, references to group allegiances, such as the Russell Group may act as a *sign* for quality.

Higher education branding highlights the institution's distinguishing features to create an impression (Bennett & Ali-Choudhury, 2009). The traditional model of brand development was based on McCarthy's (1964) *Four Ps* where product, place, price and promotion are seen as key (Heding, Knudtzen, & Bjerre, 2009). In the educational context the *product* is the learning experience encountered from enrolling on the course through to the qualification received. The *place* encompasses the institutional environment, campus and wider locality. The *price* includes all the economic factors that culminate in the learning experience, including fees and bursaries. And finally *promotion* is the overt advertising that helps create an association with a strong brand, such as Oxbridge. It is widely agreed that education is a process, and not totally or solely focussed the resulting qualification, therefore the Four Ps model needs to be expanded to include a service model approach. The University Experiences Framework is one such model, developed to assist HEIs in understanding how their market orientation relates to students' values (Ng & Forbes, 2009). This model introduces three more Ps through *people*, *physical evidence* which refers to the environment from buildings to equipment, and *processes* which are the procedures that students engage with, for example enrolment, tutorials and the learning experiences. Subsequent satisfaction is the correlation between the students' expectations and their ongoing experiences (Ng & Forbes, 2009).

Breaking down the educational experience into people, physical evidence and processes may allow for a clearer differentiation between approaches to institutional branding.

As branding sets out an institution's strategic vision it holds the key to communicating the potential student experience (Curtis, Abratt, & Minor, 2009). In order to examine how this may be presented Bennett and Ali-Choudhury (2009) divide HE branding into three components: covenant, quiddity and representation. The *covenant* consists of the core values that are communicated to the outside world, often intangible promises that institutions may not be able to quantify or deliver (Gutman & Miaoulis, 2003). Unlike the covenant, *quiddity* represents the *actual* rather than *promised* elements. These tend to be the distinctive features in the institutional offer, including location, make-up of the student body and the types of programmes offered. The final aspect of representation is the *symbolism* through which the institution is represented, which includes aesthetic components such as the logo, and various communication channels including the prospectus and websites. In their research investigating FE students' views of a range of post-1992 universities, Bennett and Ali-Choudhury (2009) found quiddity to be the most important branding factor as this informed students' attitudes in both affect and subsequent behaviour. However, this research focused on the views of non-traditional learners to post-1992 universities. As non-traditional learners are more attracted to post-1992 universities (Trowler, 2003), it is not possible to establish how they perceived the branding of other HE providers.

4.2.4 Branding and reputation

One contentious issue within the marketing of HE is whether branding and reputation are distinguishable from one another. Chapleo (2007) interviewed fifteen Vice Chancellors from different types of universities, revealing differing views of the concept of branding dependent upon the type of institution. The pre-1992 university respondents saw reputation as a naturally evolving perception from which their differentiated brand was created. As the brand is a consequence of receivers' interpretation of the available information there may be more

than one perception of an institution's brand. However, the post-1992 university respondents saw a brand as a manufactured method of differentiating institutions from each other. Their branding process is a commercial venture undertaken by the marketing department, ensuring that the brand is carefully constructed and promoted. Bennett and Ali-Choudhury (2009) concur with the post-1992 universities' Vice Chancellors' views by suggesting that it is the branding that is antecedent to the reputation.

As post-1992 institutions have been part of the HE landscape for nearly a quarter of a century, they have had time to formulate their identity and construct a brand based on their values and distinctive features, therefore establishing a reputation with a supporting track record. As higher education has been provided in college settings for a comparable period of time as post-1992 universities, they have had equal time to develop their brand. But Gillingwater (2014) argues that as a sector CBHE has an image problem with the public due to bad press and political scapegoating through erroneous links being made between bogus teaching institutions and FECs. The dual function of FECs, with the majority of their provision being further education, the HE offer to students may not be so clearly defined or as well developed in the promotion and marketing materials as those from the university sector. Although FECs work in partnership with universities, the agreements they have with these institutions are varied, a college may partner with a number of universities, and consequently there is a tendency is for FECs to organize their own marketing. This provides the college with its distinctive, independent identity, which can be particularly important when the college and university is competing to recruit the same students. The differences in research culture may affect marketing over time, due in part to the Research Excellence Framework cycle of research evaluation that the universities are subject to, but which does not impact on CBHE provision. The cyclical events may impact on marketing strategies, creating sectorial differences.

The research reported in the next section involves the analysis of the welcome messages from a sample of different HE provider prospectuses to establish whether there are

differences in how teaching and research references are used to define their brand. See section 3.2 for a review of the Methodology.

4.3 Results

4.3.1 Thematic content of the welcome messages

The welcome messages were analysed with reference to statements made about teaching and research. The themes that emerged related to teaching, research, staff, and students benefit of research (Table 4.1).

Theme	Definition
Teaching	This refers to the claims made with respect to the quality of teaching. The documented claims may be through judgements made by inspections or survey, whereas claimed quality was through unsupported statements.
Research	This refers to references made to the reputation of acknowledged or perceived achievements of institutions with respect to research without reference to student benefits.
Staff	This refers to the quality of staff demonstrated through qualifications, experience or reputation in their different roles; be they claims of teaching or research, being an expert in their field or being accessible to students.
Student benefits of research	This refers to the benefits that students would experience through their lecturers being research-active or the more formal inclusion of research being included within the teaching experience.

Table 4.1 Identification and definition of themes generated

Over the observation period (2012 to 2014) the only changes to any of the themes was an increase in references to research quality in 2014 from both the pre-1992 and post-1992 universities (Table 4.2). This change in universities' approach to research in their marketing was through specific references to *active* research projects compared to the generic statements made in previous years. It is likely that this change was directly linked to of the Research Excellence Framework exercise (REF2014). This change was not seen in the CBHE marketing.

Theme	Institution	2012	2013	2014
Teaching	Pre-1992	0	2	1
	Post-1992	3	6	4
	CBHE	11	11	12
Research	Pre-1992	5	4	11
	Post-1992	1	2	4
	CBHE	0	0	0
Staff	Pre-1992	3	5	4
	Post-1992	2	2	3
	CBHE	6	9	10
Student benefits of research	Pre-1992	1	3	2
	Post-1992	1	5	5
	CBHE	0	0	1

Table 4.2 Changes to the frequency of themes over time

There is a clear difference in the way institutions promote their approach to the teaching-research nexus to prospective students (Figure 4.1). The colleges' welcome messages focused on teaching and staff qualities, with no reference to research. A third of the post-1992 university references were made to teaching and to how the students would benefit from their research, whereas the pre-1992 universities focused on their research and staff expertise.

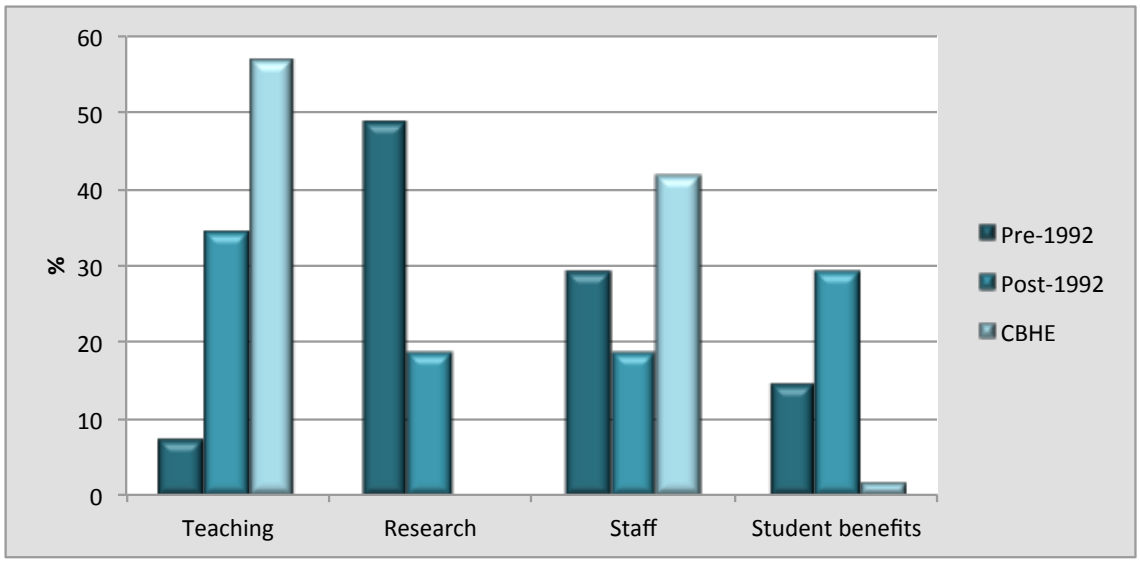

Figure 4.1 Comparison of themes by institution type

4.3.2 References to teaching

The CBHE prospectuses made twice as many references to teaching than the universities, focusing on their teaching ability by claiming to "deliver excellence" or "offer high quality

teaching" (Table 4.3). They also used documented sources to support their claims through reference to inspections, such as Ofsted. The post-1992 universities made very similar references to teaching quality as the colleges, with claims of courses being "underpinned by inspirational teaching" whereas the pre-1992 universities made comparatively few references to teaching quality. However with the inception of the Teaching Excellence Framework in 2017 this may be set to change, with institutions actively promoting their teaching quality recognised at gold, silver and bronze standards.

	Documented	Claimed	**Total**
CBHE	14	20	**34**
HEI	4	12	**16**
Post-1992	3	10	**13**
Pre-1992	1	2	**3**

Table 4.3 Number of statements made with reference to teaching

4.3.3 References to research

No reference was made within college welcome messages to research (Table 4.4). The post-1992 universities frequently made reference to "the long-standing impact of our research" and often highlighted their global reputations. The pre-1992 institutions made the most references to their research reputation, many claiming quality through statements such as "international and vibrant research-led academic environment" but more references were supported by documentable claims such as being a "founding members of the prestigious Russell Group of research-intensive UK universities" or through the former research assessment grading such as, "90 per cent of our research is internationally recognised (RAE 2008)".

	Documented	Claimed	**Total**
CBHE	0	0	**0**
HEI	13	14	**27**
Post-1992	2	5	**7**
Pre-1992	11	9	**20**

Table 4.4 Number of statements made with reference to research

4.3.4 References to staff

There are distinctly different patterns of recognition of staff qualities between the CBHE and HEIs' marketing (Table 4.5). The colleges focusing on teaching qualities and access to staff, make references to their courses being "delivered by teams of highly qualified lecturing staff" who they refer to as being able to offer "more contact time with tutors and lots of individual support".

	Teaching	Access	Research	Expertise	**Total**
CBHE	15	10	0	0	**25**
HEI	4	2	2	11	**19**
Post-1992	1	1	0	5	**7**
Pre-1992	3	1	2	6	**12**

Table 4.5 Number of statements made with reference to staff

Universities make comparatively few references to teaching ability, where the post-1992 universities focus on how staffs' academic expertise is integrated into the learning experience, such as this claim that "students will be led by dedicated academics who are leaders in their field". By comparison a typical pre-1992 claim that "our staff are at the cutting-edge of their disciplines" without reference to the students' experiences of this quality. Very few references were made solely to staff research skills.

4.3.5 References to how student benefit from research

There was only one college which made reference within their marketing to how staff research activity benefits the student experience (Table 4.6). By contrast, the post-1992 university marketing was more likely than the pre-1992 university marketing to promote student benefits from institutional research-activity. Post-1992 universities referred to the benefits of an institutional research culture where their staff "enjoy what they do and they pursue their own research and learning with a passion and enthusiasm that permeates the whole University", and the more specific application of research incorporated into teaching through "research-engaged teaching helps you to maximise your potential".

	Research activity	Research informed teaching	**Total**
CBHE	1	0	**1**
HEI	10	7	**17**
Post-1992	6	5	**11**
Pre-1992	4	2	**6**

Table 4.6 Number of statements made with reference to how students' benefit from research

The pre-1992 universities suggested a more general impact on the educational experiences through "keeping students up-to-date with the excitement and knowledge of all the latest developments".

4.4 Discussion

Patterns have emerged in the stance taken on teaching and research, which differ between the types of higher education provider, which are further explored below.

4.4.1 Comparisons of institutional branding

From the welcome messages analysed there were clear differences at an institutional level as to how institutions place themselves to appeal to the segments of the higher education market. CBHE providers promote the excellence of the learning experience that is delivered by experienced and qualified teaching teams. Colleges were least likely to change their welcome message over the observation period, possibly suggesting that they did not see this as a period of change in their provision or the marketplace, and not being affected by the REF2014 as the universities were. The post-1992 institutions promote teaching and research, primarily linked to how students will benefit from this through research-informed teaching. The pre-1992 universities advertise their brand, based on global research reputations and the expertise of their staff, with reference to outstanding *teachers* rather than *teaching*, who will keep students up to date.

4.4.2 References to teaching

A clear pattern has emerged where the CBHE marketing focused primarily on teaching. This may be explained as CBHE lecturers are not typically required to be research-active as colleges are not included in the REF, therefore their contracts and duties are primarily teaching-focused. In addition, CBHE lecturers are required to have a teaching qualification (TES, 2012), and their teaching abilities are directly and continually assessed through teaching observations, annually internally, and externally through Ofsted (O'Leary, 2013). This may therefore explain their emphasis on this factor as a reflection of the sector's ethos. The colleges' teaching-focused branding emphasised staff experience, with colleges focused on teaching ability and made links to students. It may be that the colleges are trying to compensate for a lack of research culture by highlighting differences between CBHE and the university experience, by suggesting that "students can expect more contact time with tutors" and that their "small class sizes enable tutors to provide you with a high level of personal support".

The HEIs' references to teaching are not consistent across university type, with a third of messages coded from the post-1992 institutions referring to the quality of their teaching. How much this may still be a historical residue of the post-1992 universities having once been polytechnics with teacher training provision, is unknown. If this is the case then the ethos runs deep as this sample have enjoyed university status for over twenty years, but still prioritise teaching over research in how they position themselves in their branding, although comparisons are being made to pre-1992 institutions, some of which have had centuries to develop their brand.

The pre-1992 university marketing also stated that students benefit from their staff being research-active. There are interesting differences when examining the pre-1992 university messages, where only seven per cent of the content of the welcome messages

related to teaching. Unlike the other institution types, they referred to teaching not only as a process, but made equal reference to excellent teachers.

4.4.3 References to research

When considering research activity the trend is reversed, with the colleges making little or no real mention of research. Research is conducted in some colleges, but as there is no requirement for CBHE staff to be research-active there have been no initiatives to embed research into the learning experience as was observed in the university sector (HEFCE, 2015a). Some colleges have received support to increase their levels of scholarly activity, such as Plymouth University's use of Centre for Excellence in Teaching and Learning (CETL) funding for a Higher Education Learning Partnership (HELP) to develop research and scholarship with partner colleges (John, 2005). More recently HEFCE have addressed this by supporting the Association of Colleges in a Scholarship Project to engage more CBHE lecturers in a range of scholarly activities (AoC, 2015).

The post-1992 universities made surprisingly few references to their research as a branding point to students, but where references were made they highlighted their international research reputation. By contrast, nearly half of the pre-1992 university messages related to their research through their membership of exclusive research groups and their cutting-edge discoveries. This was also reflected in the pre-1992 university references to their staff, which were predominantly research related, as "rising stars", at the "forefront of their discipline", and undertaking "cutting edge" research.

4.4.4 References to the teaching-research nexus

As it is not the traditional remit of CBHE lecturers to undertake research, again there was no real reference to the teaching-research nexus. However, the post-1992 institutions' branding highlighted the teaching-research nexus most strongly. They focused on what would be offered to the students in terms of teaching quality, and were most likely to highlight their staffs' qualities with reference to how they would bring research into the learning experience.

It is surprising that the pre-1992 universities have not made more of this, as less than fifteen per cent of their welcome messages brought together the concept of research within teaching. Their lack of reference may either be taken as an implicit understanding that two factors are naturally integrated, or it may suggest that somehow being in an environment where research is conducted will have an impact on the learning experience without any formal or strategic integration into the curricula. This may reflect Neumann's (1992) global nexus where the link occurs at a departmental level, with the research ethos permeating the environment.

4.4.5 Links to marketing theory

The CBHE welcome messages highlights Bennett and Ali-Choudhury's (2009) *quiddity* approach to branding where they highlight their distinctive features for comparison with other institutions. They focused on the teaching-learning experience, local links to employers and affordable education. These factors also relate to Heding's *product* component, making reference to the teaching quality, the price component through emphasis of the affordability of local study, and Ng and Forbes' (2009) *people* component and the lecturers' teaching ability, thereby personalising the experience.

The post-1992 universities also adopted a *quiddity* stance, which has been shown to be more effective in attracting students to post-1992 universities (Bennett & Ali-Choudhury, 2009) by clear reference to what students can expect from the learning experience. The *process* approach underpins their welcome messages through the reference to the excellence of teaching and its integration with research activity.

The pre-1992 universities employs a different approach to branding which is highly reliant on reputation, where the student is made aware of an exceptional brand (international, cutting-edge and globally recognised) where they will benefit by their association to such a brand if they do enrol. If research is involved in their learning experience then the *product* component of Heding's (2009) Four Ps theory is met, as research becomes part of learning, as

is the *promotion* aspect by continued reference to their research reputation. This in itself is interesting as the pre-1992 institutions are promoting their research profile; a quality that is separate from teaching, therefore corresponding with Bennett and Ali-Choudhury's (2009) *covenant* component of HE marketing, where the focus in on the intangible core values, rather than the actual learning experience.

What these data suggest is that there are institutional differences in the ways that the teaching-research nexus is represented through institutional marketing information, what institutions offer to prospective students is a stance on how the institution perceives the importance of research, and the degree to which this is linked to the student experience.

4.4.6 Future developments

What is not clear is how the targeted marketing approach observed here will play out with further marketization of higher education. The increased competition since the removal of the student numbers cap, and the rise in tuition fees, may encourage diversity to maximise income to survive, with some institutional failure predicted by the Government in their latest white paper (BIS, 2016a). The impact the new private universities will have on the higher education market is also unknown. These new institutions are unlikely to have a long held research culture, and a limited track record in producing successful graduates to rely on. Their strongest marketing card is likely to be the experience of the academic staff they attract. However, the UK Government believes that the newcomers to the market will drive up the standards of teaching through innovative approaches (BIS, 2016a), although they give no indication of how this will occur.

4.5 Conclusion

In exploring the differences that exist between different types of higher education institution regarding their stance on teaching and research it has been found that the marketing approach employed by the different institutions differs dependent upon the qualities they

have to offer, and the students they are trying to attract. The colleges and post-1992 universities are relying on quiddity to get a clear message to their market, being explicit about what students can expect. The covenant approach taken by the pre-1992 institutions seems at odds with an effective marketing strategy, as it does not focus on the needs of the students who are the target. This may be because these institutions believe that their long established and international reputation negates the need to make features of the student experience explicit.

These findings offer only a snapshot in time and were restricted in breadth as the focus was solely on appraising the welcome messages of the Principal or Vice Chancellor. However, it is reasonable to assume that these messages to prospective students sets out the mission of the institution with their core values on teaching and research at the fore. If these are the values of the institutions, then it would seem logical that the students would experience these forms of scholarship in their daily interactions with the staff. This point is further researched in Chapter 5.

Chapter 5

Institutional Differences in Lecturers' Teaching and Research Activities

5.1 Introduction

Having established in Chapter 4 that different types of institutions present themselves to potential students by emphasising different qualities, it is necessary to establish whether the brands developed by different types of institution reflect working practice.

In order to establish *to what extent do lecturers' individual beliefs and behaviours reflect differences identified at an institutional level*, this chapter examines the literature linked to identity, and patterns of academic publication. It then considers the findings of the survey exploring lecturers' perceptions and behaviours linked to research and teaching in the different institutions types. This yielded 138 responses from 21 pre-1992 university lecturers, 25 post-1992 university lecturers, and 92 CBHE lecturers. In order to further triangulate the findings, the reported patterns of publication will be compared to those observed in a selection of eight issues of 21 established, peer reviewed journals.

5.2 Review of literature

5.2.1 Policy drivers

In order to obtain research funding English universities are required to submit details of the research output of chosen academics for assessment through the Research Excellence

Framework (REF, 2011) (see section 2.4.1). This process is not applicable in further education colleges. To promote parity of provision between university and CBHE, where CBHE staff are not typically research-active, HEFCE's 2006 consultation document, *Higher Education in Further Education Colleges: Consultation on HEFCE Policy*, stated that CBHE staff should have adequate opportunities and resources for scholarly activity (HEFCE, 2006), a stance which was reiterated in 2009: "Many colleges see the development of a research culture as one of their strategic objectives" (HEFCE, 2009, p. 167). Such a difference in approach will inevitably affect the roles undertaken in the different institutions.

As discussed in section 2.4.1, the traditional differences between universities' and colleges' relationship with teaching and policy may become eroded with the introduction of the Teaching Excellence Framework, the first opportunity for these different sectors to be assessed using the same metric.

5.2.2 University lecturers' perception of their research role

The nature of HE is changing where institutions are required to be more efficient, having to engage in commercial research, show valid contributions to society and undergo more stringent competition for funding, especially since the advent of the Research Assessment Exercise and the more recent Research Excellence Framework (Hakala, 2009). The emergent managerialism of HE has led to corporate strategies oriented towards the market and customers, driven by a top-down system where the focus is on costs, efficiency and monitoring, rather than knowledge and learning (Becher & Trowler, 2001). One potential outcome of the current cuts in public expenditure is to reduce the wage bill by losing older, established staff through voluntary redundancy and restructuring, with a casualization of the workforce through a shift towards more part-time contracts (Locke & Bennion, 2010).

Through the marketisation of HE, an audit culture is developing (Anderson, Wahlberg, & Barton, 2003; Beck & Young, 2005; Clegg, 2008; Harris, 2005; Leathwood & Read, 2012). The impact that such policy changes have had on university staff is that the research process has

become increasingly institutionally driven, centralised and bureaucratic (Harley, 2002), with autonomy being eroded (Locke & Bennion, 2010) and Harris (2005) believes that lecturers are being asked to sacrifice their academic identity in favour of a corporate identity. The intrinsic motivation to be a good researcher is now being replaced by the more extrinsic need to meet the external assessment standards (Leisyte et al., 2009). Failure to meet the REF expectations has led to punitive measures being threatened by some institutions (Jump, 2013). The increase in bureaucratic workload, through the need to evidence research activity, reduces the time left to undertake research (Piercy, 2000) leading to negative impacts on work-life balance (Clegg, 2008). Jump (2013) reports that more than a quarter of academics questioned claimed that half of their REF outputs are written outside of their contracted hours.

Departments are the group with which academics most strongly identify, due to their defined community form and boundaries, and as such can shape and reinforce its members' identities through socialisation processes and regulatory practices (Henkel, 2005). This is important as the research assessment score is assigned at a departmental level, therefore individual failures affect their colleagues' reputation as well as their own, leading to pressure to achieve as a communal responsibility (Harley, 2002; Henkel, 1999). Awareness of the consequences of failure, such as reducing the proportion research funding received from the funding councils, and the impact that a poor grade has on external funding sources, all add to the pressure and feelings of shame (Harley, 2002; Leathwood & Read, 2012). Failure to produce the required four publications (REF, 2011) may lead to the strategic designation of 'not research-active', or being placed on a scholarship contract with an increased teaching load (Henkel, 1999; Leathwood & Read, 2012).

5.2.3 CBHE lecturers' perception of their research role

Policy is interpreted by institutions at managerial level and their responses are integrated into the working practices of their employees. Young (2002) argues that anti-academic managerialism creates barriers to scholarly activity, and although a survey of a managers at a

quarter of the institutions providing UK CBHE reported that scholarly activity was essential for quality HE, only half of the responding institutions had a definition as to what was considered scholarly activity (King, Widdowson, Davis, & Flint, 2014).

HEFCE (2003) claimed that opportunities to encourage scholarly activity through staff development were missed by CBHE management, where too much focus is placed on quality assurance training as opposed to meaningful subject-related training, demonstrating a failure to differentiate between scholarly activity and continuing professional development (King et al., 2014). Yet many CBHE lecturers feel that scholarly activity and research is important to their role (Turner, McKenzie, & Stone, 2009), and that such opportunities do contribute to their professional identity as a HE lecturer (Turner & Carpenter, 2012; Turner, McKenzie, McDermott, & Stone, 2009). CBHE lecturers cited barriers to research as being insufficient time given for professional updating (Harwood & Harwood, 2004), and a lack of support from management and partner universities (King et al., 2014).

This lack of support may be explained by HE being only marginally represented in the portfolio of courses offered by a college, thus managers tend to focus more on the FE aspect of provision, requiring HE to fit within FE systems, such as irrelevant staff development activities (Turner, McKenzie, & Stone, 2009). This mismatch in processes can be bureaucratic, and driven by FE funding mechanisms that do not relate to HE practice and provision (Feather, 2011a). This is reflected in the lack of time given to CBHE lecturers to undertake scholarly activity (Turner, McKenzie, McDermott, et al., 2009). Furthermore evidence suggests that lecturers believe that management do not understand (Feather, 2012; Turner, McKenzie, McDermott, et al., 2009), nor support their role in areas such as timetabling, where high teaching commitments limits the chances for lecturers to be involved in research (Feather, 2010, 2012; Harwood & Harwood, 2004).

Interviews with CBHE lecturers indicated that they felt that their institutions did not support a research culture or offer dissemination opportunities due to lack of resources,

although some lecturers found opportunities to develop their research skills through their partner universities (Gale et al., 2011). Where college and partner universities have been supportive, CBHE lecturers have developed research profiles and as a result experience feelings of confidence and credibility (Mason, Bardsley, Mann, & Turner, 2010).

As CBHE lecturers are not required to hold a doctorate, many choose to undertake additional qualifications as a way of engaging in scholarly activity and to supplement their delivery. These qualifications are generally undertaken in their own time (Harwood & Harwood, 2004), and are self-financed (Young, 2002), with college management sometimes unwilling to support further qualifications for fear of the staff moving on to universities on completion (Feather, 2012). Despite having invested so much into their own career development, CBHE lecturers felt it hard to celebrate success in achieving PhD or other additional qualifications due to managements' lack of recognition of their efforts (Gale et al., 2011; Turner, McKenzie, & Stone, 2009; Turner, McKenzie, McDermott, et al., 2009; Young, 2002).

CBHE lecturers generally felt that university lecturers have more opportunity to be autonomous and have more freedom because they did not have the workload constraints of FE contracts (Turner, McKenzie, & Stone, 2009; Turner, McKenzie, McDermott, et al., 2009), although this view was based on limited interactions with colleagues at the partner university. A national survey of CBHE lecturers found that college and university cultures were deemed so different that they could not perceive of them merging (Feather, 2011a).

In other research, CBHE lecturers did not perceived their role as academics (Feather, 2010), but as interpreters of knowledge, translating and facilitating learning. Their engagement with scholarly activity has been described by Feather (2011b) as "reading to teach" and many respondents were not even familiar with the phrase *scholarly activity*. Although many stated that they were passionate about teaching, they would also welcome the opportunity to undertake research but this was not expected of them, nor supported within their institutions

(Feather, 2011b), thus widening the perceived gap between the role of university and college lecturer. However Cunningham and Doncaster (2002) found that offering interested staff the opportunity to participate in a research-based staff development programme encouraged the development of a research culture, and subsequently all staff within that college have benefitted from the programme.

5.2.4 Patterns of research publication

The quality and number of research publication is a core metrics in the REF, acting as a gauge of institutional research activity. Patterns of academic publication are continually evolving, with collaboration becoming more frequent, and variation within research partnerships becoming more diverse (Godin & Gingras, 2000). However, despite a considerable interest in research development in the academic literature, relatively little is known about changing patterns of publication, and the scale of collaboration between individuals and institutions.

Scientometrics, the measure of scientific research, is one way of exploring the patterns and evolution of research publications over the last few decades, and distinguishing, for example, changes in the patterns of collaborative research. *Intramural* publications are those produced by academics working within institutional research groups or with departmental colleagues within their institution, whereas *extramural* publications are collaborations between different universities and with partners in government, commerce or industry, are becoming more frequent (Glänzel & Schubert, 2004). A longitudinal survey of Norwegian scientific publishing trends showed an increase in publications per academic, possibly enhanced by the increase in co-authorship, and an increase in international collaboration (Kyvik, 2003). Similarly Wagner's (2005) study of scientific papers published between 1990 and 2000 found the average number of papers published in scientific disciplines to have increased by 67%, whereas the increase in international collaborations had increased by 246%. The rise in the number of countries making up the samples increased from 53 in 1990 to 76 in 2000, showing an expanding network and productivity rate.

For such an increase in collaborative output there must be tangible benefits for the researchers and institutions involved, although this may be dependent on the research funding system, which varies between countries. These systems may include performance-based research evaluation systems that are output-oriented, where funding is granted for the specified deliverables of research; as opposed to input-oriented systems which aim to ensure that sufficient resources for research are in place (Auranen & Nieminen, 2010). The drive to undertake research encouraged by such output-orientated systems, and associated university reward and recognition systems, may be financially-motivated, and may have different implications for researcher behaviour compared to more input-orientated systems (Auranen & Nieminen, 2010) and indeed may favour international collaboration owing to the generally increased citations which arise. There may also be a reinforcing element driving research collaboration and success, whereby an institution's existing research reputation may attract more students, donors and collaborators, thereby leading to further prestige and income (Cyrenne & Grant, 2009). Increasingly, research funders are supporting interdisciplinary or explicitly collaborative research projects (van Rijnsoever & Hessels, 2011). However, income may not be the only rationale for undertaking collaborative research: there may be more important social agendas which also require collaboration. Certain issues depend upon international scientific collaboration, for example where the validity of the research may be enhanced by shared access to resources, equipment and manpower (Glänzel & Schubert, 2004). Equally there may be socio-political questions that benefit from diversity of thought and interdisciplinary collaboration, such as disaster relief research (Sonnenwald, 2007).

In terms of both publication levels and collaboration rates, there are known to be both disciplinary and individual differences. For example, publication rates in the sciences are far higher than in the social sciences or arts – and the preferred output is the journal paper rather than a book or monograph (Huang & Chang, 2008). There is also some evidence that female academics from certain social sciences tend to publish fewer papers than their male colleagues, and they are more likely to co-author publications (Schucan Bird, 2011; Symonds,

Gemmell, Braisher, Gorringe, & Elgar, 2006). However, a relatively unexplored area is the differences in publication patterns between different types of HE institution.

5.2.5 University lecturers' perception of their teaching role

The emphasis on the role of research is claimed to have a negative effect on teaching (Harley, 2002; Piercy, 2000) where instrumentalist strategies are implemented where managers assume that those with an excellent research profile will also be excellent teachers (Coate et al., 2001). Reducing the teaching commitment of these rising stars (Leathwood & Read, 2012) increases the perception of the value of research, at the expense of teaching (Henkel, 1999). Research profiles are having a greater impact on promotional opportunities than teaching ability (DfES, 2003), disproportionately so in the pre-1992 universities (Parker, 2008), leading to a decrease in satisfaction for the teaching role by comparison to the research role (Metcalf, Rolfe, Stevens, & Weale, 2005).

This is not necessarily the pattern within all HE institutions; some of the post-1992 universities consider themselves teaching-intensive institutions where relatively little research is undertaken (Macfarlane & Hughes, 2009). Even within research-intensive universities there is an increasing shift in the numbers of teaching-scholarship contracts (Locke, Whitchurch, Smith, & Mazenod, 2016) and teaching-only contracts (Lucas, 2014). This can create issues of identity within institutions where those on teaching-only contracts feel marginalised, especially when under-performing research-active lecturers are threatened with teaching-only contracts (Nyamapfene, 2014) suggesting that there is a plurality of identity within the university sector. Whereas those on teaching-scholarship contracts are confused by the lack of definition of their role (Locke et al., 2016).

The disproportionate affect that the research role has on identity is reflected in the literature, where a review found comparatively few articles that focus on the identity of the *teacher* within the university sector. A longitudinal study has shown that there is a decline in UK lecturers' interest in teaching and an increase in interest in research since 1992 (Locke &

Bennion, 2010). A study of lecturers at a university which had only very recently gained university status found that the lecturers identified very strongly with the teaching role, and the research that was undertaken was pedagogic in nature, but there was little pressure to publish (Hemmings, Hill, & Sharp, 2013). However interviews conducted by Skelton (2011) with academics from a Russell Group university found that lecturers who identified themselves as teachers understood that the institution favoured research, but accepted the demarcation of their role. This stance is in conflict with the changes to HE proposed in the BIS (2011) White Paper where the focus is clearly on the student experience, and teaching offered as the catalyst for change; "We want there to be a renewed focus on high-quality teaching in universities so that it has the same prestige as research" (p2). Recent moves by the Quality Assurance Agency for Higher Education to oversee the quality of teaching has been seen to impact on identity by threatening autonomy, although this was seen as less of an issue in research-intensive institutions where research was more likely to be rewarded than teaching (Skelton, 2012).

It is the understanding of the difference between identity and role that Lea and Stierer (2011) believe to be important, as identity is the internalised state of what is meaningful to the individual, whereas the role can be defined as the functional criteria set down by management. Lea and Stierer (2011) suggest that this may be due to the impact of supercomplexity, where Barnett (2000) argues that we are entering a period where there are not only changes in the amount of information that is available to us, but the frameworks through which we understand the construction of knowledge are changing, as is the identity of the academic, leading to a loss of autonomy and collegiality.

5.2.6 CBHE lecturers' perception of their teaching role

CBHE lecturers showed different patterns of identity to those from HEIs. Young (2002) found that these lecturers primarily saw themselves as teachers, student-focused offering holistic support and the developer of students' skills (Turner, McKenzie, & Stone, 2009). They stated

that they enjoyed the challenges of the role, the stimulation they gained from engaging in their subject at a deeper level, and the freedom from the tight curriculum specified in A Level and National Diploma provision (Turner, McKenzie, & Stone, 2009; Young, 2002), although Young (2002) notes that the majority of the data gathered from her interviews highlights the issues rather than the perceived benefits of teaching in the CBHE sector.

It appears that the CBHE lecturer's identity is constructed based on how they are perceived by management and colleagues within their institutions, and a romanticised idea of what the job in a university would involve (Feather, 2011a).

5.2.7 Conclusion

The literature supports the notion that there are sectoral differences in their approaches to research and teaching, in line with those observed in their marketing material (section 4.3). The challenges that HE lecturers from both the pre- and post-1992 sectors experience predominantly relates to their research activity. For CBHE lecturers it is the lack of research opportunities, whereas for lecturers in universities it is the time and contractual pressures experienced due the research agenda. Academics in all types of institutions report that their accomplishments, although different, are not always recognised by their senior managers, and in all types of institution there are tensions between their teaching and research roles, or lack thereof.

The research reported in the next section compares sectoral differences in research and teaching activity through their self-reported levels of academic activities alongside data reflecting patterns of publication. See section 3.3 for a review of the Methodology.

5.3 Results

5.3.1 Contractual features of the survey responses

Table 5.1 shows that there were no significant institution-type differences between how long the respondents had been employed in their current post ($F_{(2,133)} = .41$, $p = .66$) or whether they were on full or part time contracts ($x^2 = 4.19$, df = 2, $p = .12$). There were significant differences in the roles based on type of institution ($x^2 = 38.9$, df = 2, $p < .0005$), where at least 75% of the universities staff were employed on a *research and teaching* contract and 73% of college contracts being *teaching-only* roles.

	Years in service		Contract (%)		Job role (%)	
	M	SD	Full time	Part time	Teaching only	Teacher-researcher
CBHE	9.15	7.12	75	25	73	27
Post-1992	9.95	6.90	80	20	25	75
Pre-1992	8.05	6.96	95	5	10	90
Total	*9.12*	*7.03*	*79*	*21*	*54*	*46*

Table 5.1 Employment-related features of sample

5.3.2 Teaching activity

There were clear differences in teaching load (Table 5.2). The post-1992 university lecturers were contracted to teach double the amount of hours than the pre-1992 lecturers, and the CBHE lecturers were contracted to teach for three times the number of hours than their pre-1992 colleagues ($F_{(2,110)} = 20.8$, $p < .0005$). Only one lecturer from a pre-1992, and two from a post-1992, university taught any FE, and 52% of CBHE lecturers taught solely HE.

	Contracted		FE teaching			HE teaching		
	M	SD	M	SD	N	M	SD	N
CBHE	21.1	7.9	7.7	6.2	39	10.7	7.0	81
Post-1992	14.7	8.5	8.7	1.7	2	8.6	5.0	20
Pre-1992	7.8	5.2	3.0	-	1	6.5	5.3	17

Table 5.2 Comparison of teaching hours per week

5.3.3 Research activity

Data regarding research behaviour was drawn from two sources. The first source reported is that from the Teaching Research Survey where lecturers indicated their levels of research activity, whereas the second source was observations of journal publication authorship and collaboration based on the different institution types.

Reported research funding applications

The survey results show that there were significant differences in the number of lecturers submitting applications for funding (Table 5.3), where 22% of CBHE lecturers made applications, compared to 50% of the post-1992 university lecturers and 71% of the pre-1992 university lecturers (x^2 = 25.3, df = 2, p < .0005), although there was no significant difference in their success rates (x^2 = 2.73, df = 2, p = .25).

	Lecturers making applications (%)	Mean: grants applied for by those applying	Mean: bids won	Success rate (%)
CBHE	22	2.88	2.00	69
Post-1992	50	4.30	2.30	53
Pre-1992	71	3.91	2.10	54

Table 5.3 Comparison of funding bid activity (over a three year period)

Reported research publications

There were significant differences in the number of staff surveyed submitting papers for publication with 94% of staff at pre-1992 universities submitting, 50% of the staff at post-1992 universities submitting and 18% of CBHE staff submitting (x^2 = 53.9, df = 2, p < .0005) (Table 5.4). Considering the overall sample, significantly fewer CBHE lecturers submitted articles for publication (t = -2.45, df = 19.5, p = .024), or had papers published (t = -2.94, df = 19.8, p = .008), whereas there were no significant differences between the university types when comparing the average number of papers submitted (t = -1.49, df = 35, p = .143), or papers published (t = -.38, df = 35, p = .702).

	Lecturers submitting papers (%)	Mean number of papers submitted	Mean number of papers published
CBHE	18	.38	.44
Post-1992	50	2.70	3.20
Pre-1992	94	5.47	3.82

Table 5.4 Comparison of paper publications (over a three year period)

Observed number of research publications

Rates observed in the published journals indicate that staff from the pre-1992 universities published 54% of the papers; the post-1992 university staff are published 45%, and staff employed in FECs published only 1% of the papers included in the sample (Table 5.5).

Institution type	Number of articles published (%)	Number of institutions	Number of articles per institution
CBHE	5 (1)	218	.02
Post-1992	269 (45)	70	3.84
Pre-1992	328 (54)	50	6.56

Table 5.5 The proportions of output by university type

When the number of papers, claimed within the survey, to have been submitted and published is plotted against the number observed within the journals there is a close match (Figure 5.1).

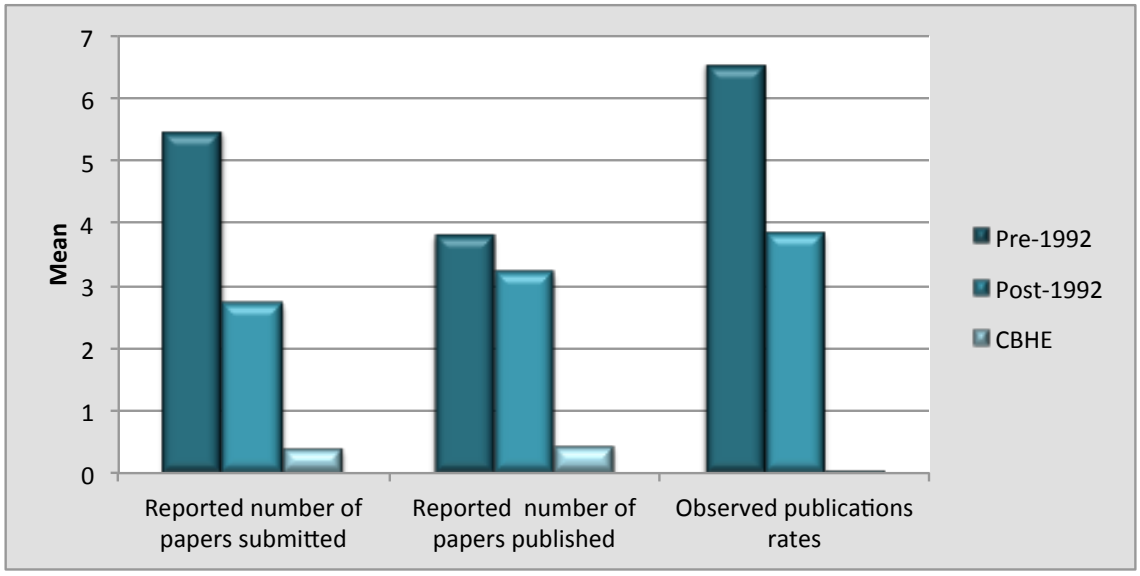

Figure 5.1 Comparison of self-reported and observed publications by institution type

Observed institutional differences in publication based on journal type

The patterns of journals publication observed shows that 44% of the papers published by pre-1992 academics were discipline-specific compared to 20% of the output observed by the post-1992 academic staff, whereas 52% of the post-1992 lecturers published in pedagogic journals compared to 41% of the pre-1992 lecturers. The CBHE lecturers' contributions were to pedagogic and discipline-pedagogic titles (Figure 5.2).

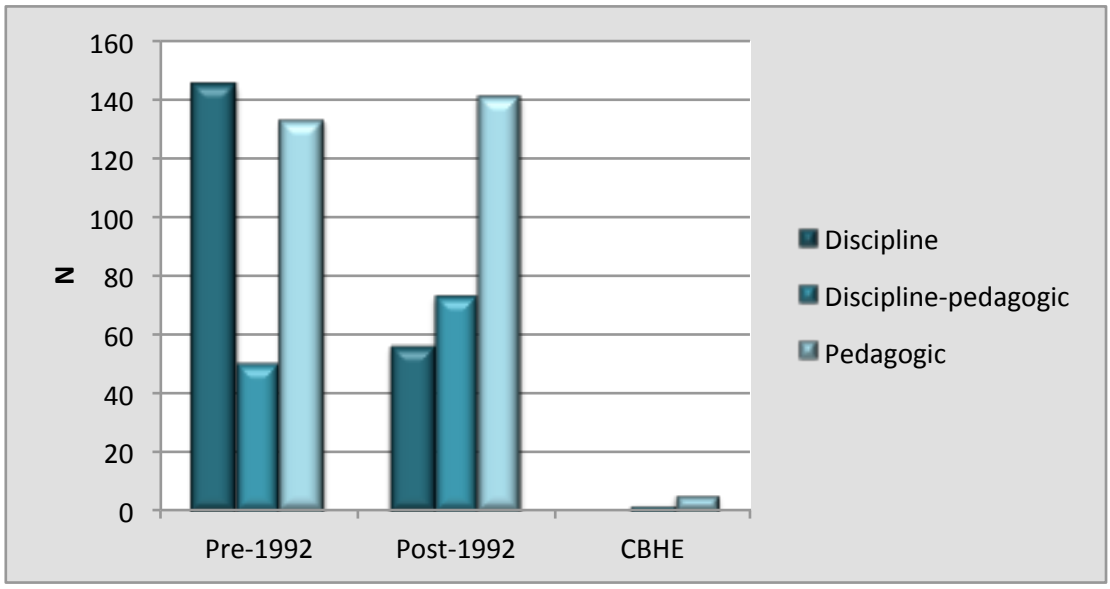

Figure 5.2 Number of publications by journal type

Authors affiliated to pre-1992 institutions published in all levels of journal quite equally, 36% of their output in higher quality journals, compared to 28% of the post-1992 affiliated authors, who were more likely to publish in the B-ranked titles. The colleges did not publish in any A-ranked journals (Figure 5.3).

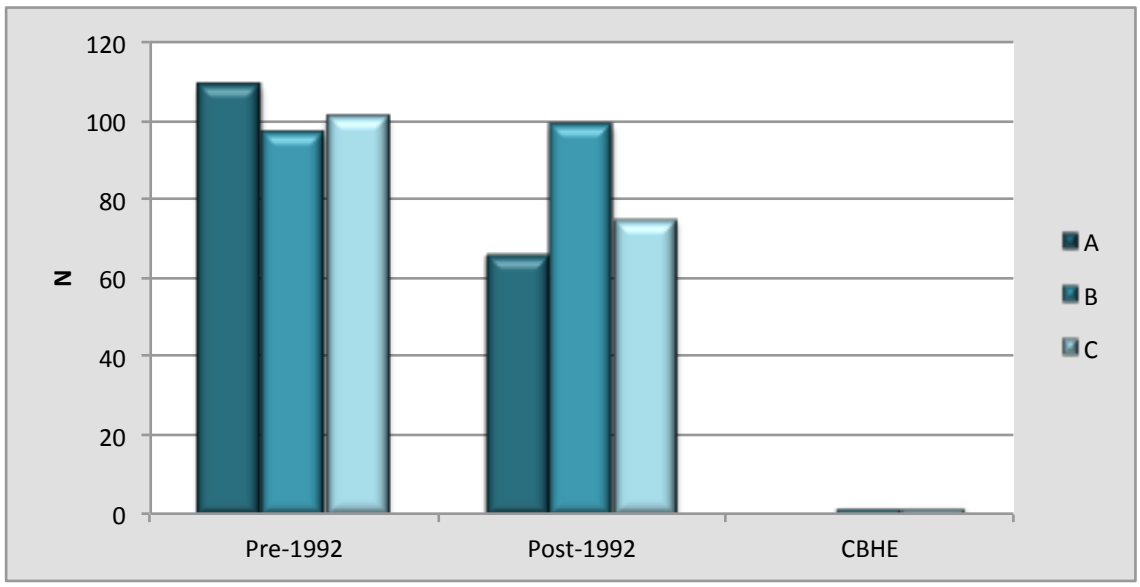

Figure 5.3 Number of publications by journal quality

Observed publication of FE-related research

Forty research papers from the observation sample were based on issues relating to CBHE. Of the forty papers only 7% were published solely by lecturers from FE colleges. Of the remaining 93%, only 12% had contributions made by those affiliated to FE colleges, meaning that 80% gave no indication as to whether CBHE lecturers had been involved in the FE-focused study.

Conference attendance

There were no significant institution-type differences in the number of conferences attended ($F_{(2,113)} = 1.39$, $p = .252$). Pre-1992 university lecturers presented significantly more posters than CBHE lecturers ($F_{(2,113)} = 6.59$, $p = .002$), and CBHE lecturers were significantly less likely to be presenting a paper at conference than lecturers from either university type ($F_{(2,113)} = 15.6$, $p < .0005$).

	Conferences attended		Posters presented		Papers presented	
	M	SD	M	SD	M	SD
CBHE	2.08	2.65	.19	.57	.97	1.84
Post-1992	1.50	2.35	.45	.99	4.20	5.20
Pre-1992	1.06	1.51	1.06	1.71	5.88	6.90

Table 5.6 Comparison of conference attendance (over a three year period)

Additional research activity

Not all research is undertaken as part of a role so alternative research activities were also considered (Table 5.7).

Contract type	Research activity	CBHE (%)	Post-1992 (%)	Pre-1992 (%)
Teaching and research	Qualification	4	16	0
	Qualification and additional research	12	8	14
	Research additional to their role	4	16	5
	No external research	2	20	52
	Undisclosed	5	16	19
Teaching only	Qualification	9	4	0
	Qualification and additional research	17	8	0
	Research additional to their role	15	0	0
	No external research	14	8	5
	Undisclosed	18	4	5

Table 5.7 Comparison of further research activity

CBHE lecturers were significantly more likely than university lecturers to be undertaking research that is not part of their job (x^2 = 15.5, df = 2, p < .0005). Including undertaking qualifications as an identifier for being research-active showed staff at pre-1992 universities were significantly less likely to be studying than CBHE and post-1992 lecturers (x^2 = 16.2, df = 2, p < .0005). Only 14% of CBHE staff claim not to be doing any research, with a further 18% undisclosed, by comparison to 8% of the post-1992 respondents and 5% of the pre-1992 university respondents.

5.3.4 Perceptions of teaching and research

Professional perceptions

When asked to rate themselves compared to the average lecturer, respondents from all institution types saw themselves as above average (Table 5.8). No significant differences between institution types were observed for lecturer's perception of teaching ability ($F_{(2,103)}$ = .16, p = .848), or research ability ($F_{(2,90)}$ = 1.26, p = .286). CBHE and pre-1992 university lecturers saw themselves as significantly better teachers than researchers, a difference that was not significant in the post-1992 universities. Only CBHE staff indicated that there was a significant

positive relationship between perceived teaching and research ability.

(Scale: Compared with others in your discipline: 1=below average, 5 = above average)

	Teaching ability		Research ability		Differences		Correlations	
	M	SD	M	SD	T	*p*	Rho	*p*
CBHE	4.21	.76	3.22	1.27	6.13	.0005	.34	.008
Post-1992	4.17	.78	3.67	1.02	1.63	.120	-.05	.819
Pre-1992	4.27	.45	3.47	.91	4.00	.001	.49	.060
Overall	**4.21**	**.72**	**3.35**	**1.17**	**6.93**	**.0005**	**.28**	**.006**

Table 5.8 Comparison of perceptions of research and teaching ability

There was a very polarized view of teaching ability, with very few lecturers even considering themselves to be average or below (Figure 5.4), whereas the perceptions of their research ability was much more equivocal with around 20% of staff indicating that they perceive themselves to be below average (Figure 5.5).

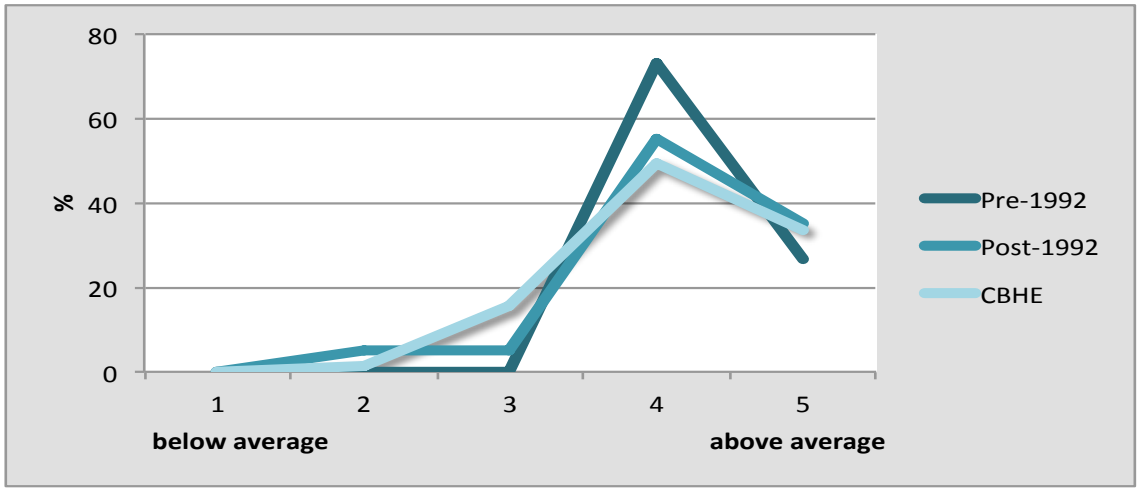

Figure 5.4 Institutional differences in perceived teaching ability

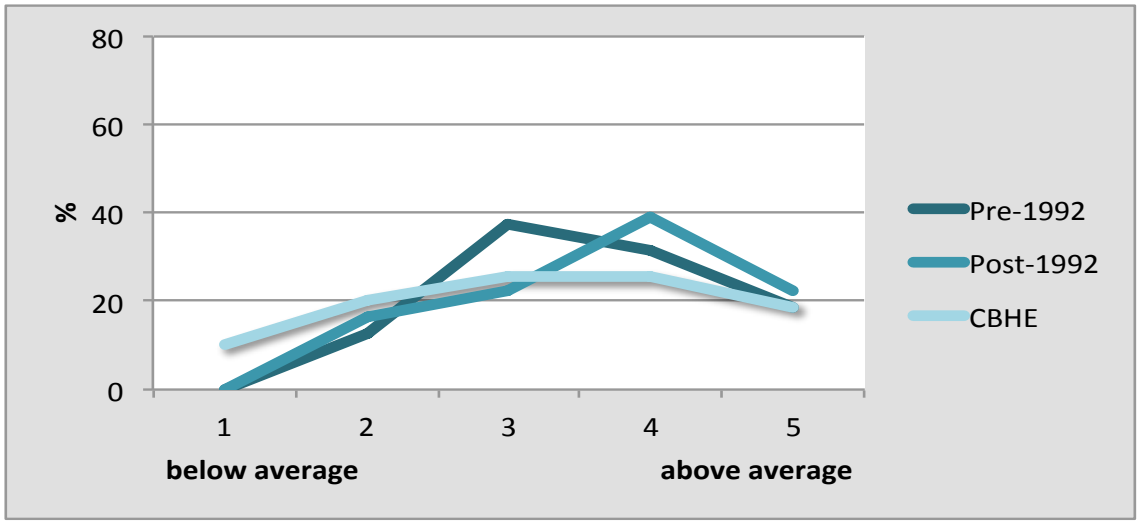

Figure 5.5 Institutional differences in perceived research ability

CBHE lecturers gain significantly more satisfaction through their undergraduate teaching than pre-1992 university lecturers ($F_{(2,105)} = 3.38$, $p = .038$) (Table 5.9), whereas there are no significant differences in satisfaction from the research role ($F_{(2,88)} = .01$, $p = .99$) between the institution types, neither were there any significant differences in how satisfied they felt in either role.

(Scale: 1 = strongly disagree, 5 = strongly agree)

	Teaching		Research		Significance	
	M	SD	M	SD	T	*p*
CBHE	4.46	.74	4.25	*.93*	1.72	.09
Post-1992	4.10	1.11	4.28	.88	-.64	.52
Pre-1992	3.94	.77	4.25	*.77*	-1.34	.19
Total	**4.31**	**.85**	**4.31**	***.88***	**.42**	**.66**

Table 5.9 Lecturers' satisfaction of their teaching and research roles

CBHE lecturers believed that their primary role was that of teacher rather than researcher (Table 5.10), and were more likely than lecturers from pre-1992 universities to view teaching as their primary role ($F_{(2,105)} = 4.78$, $p = .01$), although there were no significant institution-type differences in their view of their research role ($F_{(2,89)} = .57$, $p = .56$).

(Scale: 1 = strongly disagree, 5 = strongly agree)

	Teaching		Research		Significance	
	M	SD	M	SD	T	*p*
CBHE	4.36	.77	3.35	*1.18*	5.11	.0005
Post-1992	4.15	.93	3.68	1.15	1.16	.25
Pre-1992	3.63	1.14	3.44	*1.15*	.40	.69
Total	**4.21**	**.89**	**3.43**	***1.17***	**4.46**	**.0005**

Table 5.10 Lecturers' primary personal roles with respect to teaching and research

Interaction of research and teaching

There were no significant differences between institution-type as to whether teaching constrains research ability ($F_{(2,87)} = 1.09$, $p = .339$) or whether research constrained teaching ability ($F_{(2,87)} = 2.31$, $p = .105$) (Table 5.12). On all counts lecturers reported that their teaching role constrains their research role significantly more than their research role constrains their teaching.

(Scale: 1 = strongly disagree, 5 = strongly agree)

	Teaching constrains research		Research constrains teaching		Significance	
	M	SD	M	SD	T	*p*
CHBE	3.52	1.10	2.83	*.83*	5.08	.0005
Post-1992	3.07	1.14	2.45	.93	2.84	.011
Pre-1992	3.45	1.16	2.41	*.85*	3.37	.004
Total	**3.42**	**1.10**	**2.68**	***.87***	**6.71**	**.0005**

Table 5.11 Lecturers' view of the constraints of each role

CBHE lecturers reported that teaching enhances their research significantly more than lecturers from post-1992 universities ($F_{(2,84)} = 3.42$, $p = .037$) (Table 5.12), but there were no significant institution-type differences in the way research enhances the teaching role ($F_{(2,88)} = 2.19$, $p = .117$). Both CBHE and post-1992 university lecturers believe that research has significantly more effect on their teaching than vice versa, whereas those from the pre-1992 universities did not seem to feel that research enhances their teaching to such a degree.

(Scale: 1 = strongly disagree, 5 = strongly agree)

	Teaching enhances research		Research enhances teaching		Significance	
	M	SD	M	SD	T	*p*
CBHE	3.86	.80	4.28	.77	-4.45	.0005
Post-1992	3.27	.95	4.01	1.06	-3.67	.002
Pre-1992	3.54	.95	3.81	.85	-1.32	.208
Total	**3.69**	**.88**	**4.14**	**.86**	**-5.61**	**.0005**

Table 5.12 Lecturers' view of the teaching-research nexus

5.4 Discussion

5.4.1 CBHE lecturer behaviours and beliefs

CBHE lecturers reported having the highest teaching load within the sector, a fact already established in previous studies (Feather, 2010, 2012; Harwood & Harwood, 2004), although a shift in contracts was noted, where number of CBHE lecturers that teach only higher education has increased to from 12% in 1994, to 50% in 2016.

In terms of research activity, only a fifth of CBHE lecturers claimed to be research-active, although it was not assessed whether funding applications were collaborative, or what amount had been awarded. In addition, over half of the CBHE lecturers indicated that they were undertaking research activities outside of their role. The types of extracurricular research undertaken ranged from studying for further qualifications, such as Masters and PhD in their own time, to discipline-based or client-driven primary research. This is supported by previous research which has shown that CBHE lecturers feel they have the knowledge, skills and drive to undertake research, but have a limited level of output possibly due to a lack of institutional support for research activity (Medcalf, 2014).

CBHE lecturers were the least research-productive group in terms of publication in peer reviewed journals. The few articles affiliated to CBHE lecturers within this data set were *pedagogic,* and primarily B-ranked. Although FECs have been providing HE courses in the UK for more than a decade, their volume of research output in no way resembles the trends of the post-1992 universities, supporting the literature that points to an institutional culture that does not encourage research activity. This may be due to a lack of time, where the teaching hours at colleges are substantially higher than at universities (Turner, McKenzie, & Stone, 2009), thus reducing the potential opportunities to undertake research. The CBHE lecturer responses may relate more closely to Griffith's (2004) original definition of research-informed teaching, where the focus is on lecturers informing their own practice through pedagogical research rather than undertaking discipline based research.

When considering scholarship, CBHE lecturers attended more conferences but were least likely to be presenting a paper. This may suggest that although the CBHE lecturers may not be disseminating as much as their university counterparts, they are engaging in scholarly activity and benefitting from consulting current research.

CHBE lecturers perceived themselves to be a significantly better as teachers than as researchers. This may be because CBHE lecturers perceive themselves as teachers first (Turner,

McKenzie, & Stone, 2009; Young, 2002), especially as colleges are not included in the REF, nor are staff expected to be research-active. Teaching was reported as placing greater constraints on research activities than research did on teaching, possibly due to lack of time as suggested by the Scarcity Model (Hattie & Marsh, 1996), although teaching was reported to have a positive impact on research. Corresponding with previous literature, CBHE respondents reported that the process of research enhanced teaching more than teaching enhanced research (Hattie & Marsh, 1996; Jensen, 1988; Smeby, 1998).

The activities and reported beliefs of the CBHE lecturers are highly focused on supporting their teaching role, where research is seen to inform practice rather than producing new knowledge. This links to their marketing observed in Chapter 4, where reference is repeatedly made to teaching and student support. Their marketing did not refer to research and yet there is research being undertaken, although the majority does not appear to be as part of their contractual remit. The omission of reference to research in the marketing may be because it is not seen by managements as important to the student experience, or because they are unaware of the degree of research activity being conducted.

5.4.2 Post-1992 lecturer behaviours and beliefs

Lecturers in this sample employed at post-1992 universities claimed to teach twice the number of hours than their counterparts in pre-1992 establishments, a point of differentiation that has not been previously reported. This may have implications as lecturers from both institution types are expected to reach the requirements for the REF, potentially leaving the post-1992 staff at a time-based disadvantage as suggested in the Scarcity Model (Hattie & Marsh, 1996). However, a quarter of the respondents reported being employed on a teaching-only contract, a pattern recently observed by Lucas (2014). This finding may explain why only half of the post-1992 university respondents reported actively bringing in funds or disseminating. Although this may need to be balanced with the fact that half of the post-1992 respondents

claimed to be undertaking research that was not part of their role, or pursuing further qualifications, with only 8% not undertaking any research activity.

Overall this may suggest that post-1992 institutions regard the nexus as occurring at a departmental level, described by Neumann (1992) as the global nexus, or at an institutional level through the integrationist nexus (Ramsden & Moses, 1992). This may be at odds with the tangible nexus suggested in their marketing material, where they claim that it is the research activities of their staff that enhance the learning experience although many lecturers are employed solely to teach. This may be mitigated by the fact that lecturers employed at post-1992 universities were most likely to publish papers of an educational nature with over half of their output being published in purely pedagogic titles, and a quarter of their output was in A-ranked titles. This indicates that lecturers in this sample who work at post-1992 institutions may see the process of research activity as a benefit to students, rather than the need to be discipline-specific. This is supported by Hewitt-Dundas (2012), who claimed that social scientists affiliated to institutions that have within the last twenty-five years changed from a vocational and educational focus, to an academic institution, are more likely to publish pedagogic papers than their older, more traditional counterparts. It is unclear whether this is due to a continuing cultural focus on matters educational, or whether there are barriers to publication in the more discipline-specific journals due to lack of reputation or resources.

The post-1992 university lecturers did not tend to see a relationship between their research and teaching ability. They did report that teaching placed a constraint on their research activities, which might be a reference to those on teaching-only contracts. They also claimed that the process of research enhanced teaching more than teaching would enhance research as established in the literature (Hattie & Marsh, 1996; Jensen, 1988; Smeby, 1998). This may be the product of their pedagogic research, and reiterates the message within their institutional marketing that emphasises the student benefits of research activity rather than focusing on the staff's research activity *per se*.

5.4.3 Pre-1992 lecturer behaviours and beliefs

Lecturers from pre-1992 universities reported having the lightest teaching load within the sector, with only 5% of the respondents undertaking research unconnected with their role. They were more likely to publish in discipline-specific titles, of higher ranking (a third in A-ranked titles) either through international collaboration or as sole authors, corroborating the institutional marketing points. This finding relates closely to their marketing material where their global research status was strongly emphasised. Establishing causality for these patterns is problematic as it is not clear as to whether their prolific output is the product of a highly engrained research culture with more resources being available, such as the networking opportunities through attendance at international conferences.

Interestingly, the respondents in this sample did not see a relationship between their research and teaching ability, but did perceived themselves to be above average in both teaching and research, and saw themselves as significantly better teachers than researchers. It is difficult to say why those from the pre-1992 universities might also feel they are better teachers than researchers as the findings so far indicate they are highly productive researchers, and literature regarding HE academic identity focuses primarily on the research role. The pre-1992 lecturers were least likely to report that research enhances teaching and saw the impact of teaching as more important in its influence over research than those from post-1992 institutions. This suggests that lecturers from pre-1992 institutions have a much more symbiotic perception of research and teaching, which was evident in their inability to clearly differentiate between the two factors at an institutional and individual level. This integrated view was also observed in social science and humanities lecturers consulted by Robertson (2007).

The volume of pre-1992 university lecturer research activity links to Neumann's (1992) tangible nexus, and the strong integrationist approach suggested by Ramsden and Moses (1992) where it is the lecturers that create the link between research and teaching. This relates

to the findings in their institutional marketing where pre-1992 institutions promoted their research reputation, international status and staff currency and expertise.

5.4.4 Institutional comparisons

These findings suggest that the ethos promoted by the different institution runs throughout the institution in terms of academic staffs' behaviours and beliefs. There are sectoral differences between college and university staff with respect to the reported teaching hours, but there are also differences within the university sector, reflecting the issues suggested in the Scarcity Model (Hattie & Marsh, 1996). These findings also reflect institutional references made to teaching within the institutional marketing, where the average hours of contracted teaching reflects the emphasis made to teaching excellence in their marketing material (section 4.3).

When considering institutional differences in research outputs a similar pattern was reported in the survey as was observed in the sample of journals analysed, suggesting that the publication behaviours of the sample questioned reflects that of social science lecturers. The observation of publishing patterns has shown discernible trends in publication, primarily based on institutional age and reputation. Linton, Tierney, and Walsh (2011) have shown that there is a clear relationship between research and reputation, although this may be a circular argument where departmental reputation may attract highly productive academics, which in turn increases the departmental reputation. It has to be acknowledged that this is only one metric. There are many other forms of dissemination than purely peer-review journals, such as trade magazines, conferences and workshops. And indeed dissemination in itself does not necessarily relate to levels of research activity, which may be undertaken but not reported on. This may explain the differences in CBHE lecturers' claims and observed publication levels. If 20% of CBHE lecturers indicated they were research-active, and yet less than 1% of articles in the sample were published by CBHE authors, this suggests that either the research activity

does not result in publication or that they are not seeking publication in the types of peer-reviewed journals analysed as suggested by Bell, Eaton, Hodgson, Mytton, and Smith (2017).

Although different patterns may be emerging within the university sector, care may be needed when interpreting findings based on university type. The patterns of university publications observed may be linked to the period in question, forming part of the REF2014 where four papers are required to be graded. Whether this would necessarily be the degree of manuscript submission over other time periods is open to debate as research assessment has been shown to be a forceful driver of university lecturer activity (Leathwood & Read, 2012). The use of research contract time as a predictor of research activity is not necessarily predictable, as teaching-led universities have produced impressive research profiles, commensurate with equivalent sized research-active universities (based on RAE 2008 quality indicators), and yet dedicated only 13% of their time undertaking research (Sharp, Hemmings, Kay, & Callinan, 2015). The second distinction evident between institution types is through the contractual requirement to be research-active within universities where no such obligation is required in CBHE. This factor suggests that institutional culture, driven by policy and performance management, impacts on the behaviours of staff responsible for teaching HE.

Interestingly, there was no significant differences as to whether university staff perceived teaching or research as their primary role, which is not reflected in literature that overwhelmingly suggests that university lecturers claim that research is more important, as it is the aspect that they are judged on for performance evaluation and potential promotion and recruitment (Metcalf et al., 2005; Parker, 2008). This may suggest that although the institutional structures may promote research as being more important, this is not necessarily how the staff perceive their roles, as suggested in the Different Enterprise model (Hattie & Marsh, 1996).

The Scarcity Model (Hattie & Marsh, 1996) may explain why teaching constrains research as teaching time is specified through the timetable. Research, on the other hand, is

the activity that is undertaken around teaching time. Although time constraints on research might indicate cross-institutional agreement, this may be due to their interpretation of their role. University lecturers may feel that their teaching commitments *restrict* the time available to complete research to meet their departmental needs. Whereas CBHE lecturers might consider that the higher teaching load *prevents* them from undertaking research projects.

What may be inferred is that there is an interest in undertaking research wherever lecturers were employed, but the type of institution constrains research in distinct ways which are related to policy and institutional culture. Those that work in CBHE focus more on scholarly activity to support their teaching role and further their knowledge through additional qualifications. This suggests they are research-active, just not in a manner that relates to the university sector interpretation of the term. Pre-1992 university lecturers maintain a high degree of discipline-specific research output, whereas the post-1992 university lecturers finding their niche somewhere in between, where they tend to dominate the pedagogic arena in line with their stated mission.

5.5 Conclusion

The findings suggest that differences in HE sectoral marketing reflects the degree of role-related research and teaching, but poses questions as to how research activity should be defined. Having established that there are differences in the nexus at institutional and individual lecturer levels, it is important to examine what impact these stances may have on the classroom experience.

Chapter 6

The Impact of Scholarly Activity on Teaching Practice

6.1 Introduction

Having identified that there are sectoral differences in contracted teaching hours and approaches to research (section 5.3), it is postulated that these differences may lead to sectoral variations in how teaching and research link, leading to different student experiences. Therefore this chapter focuses on the student experiences, to establish whether institutional differences are reflected in classroom practice.

This chapter reviews literature that examines how research-informed teaching has been implemented from national policy initiatives, through to institutional and departmental levels. A review of published case studies from the university and CBHE sectors are compared, showing benefits can be experienced regardless of students' level or discipline.

For this part of the study psychology students at two post-1992 universities and two FECs reported on their classroom experience. This snapshot of one week of teaching is used as a proxy to identify *to what extent does the research undertaken by lecturers in different institution types relate to teaching practice?*

6.2 Review of literature

6.2.1 Implementation of the nexus into teaching

Having observed the importance HEIs place upon the teaching-research nexus in Section 2.3, it is therefore important to assess how it has been promoted and implemented through research-informed teaching. Some HEIs have adopted the approach of research-informed teaching wholesale, building it into their institutional ethos. The University of Melbourne make research-informed teaching the distinguishing feature of the student experience, where they promise "a commitment to introducing undergraduate students to research insights, methods and values" (Baldwin, 2005, p. 1). The University of Sydney promotes a holistic approach through enhancing links between research and teaching within their undergraduate teaching and learning strategies. This approach had led to a 4% increase in positive student experience over five years, as identified from the student experience questionnaire (Brew, 2010).

In England, between 1999 and 2009, HEFCE offered funding for initiatives through the Teaching Quality Enhancement Fund (TQEF) for "the development of learning and teaching strategies and research-informed teaching" (HEA, 2013, p. 3), with a specific funding strand open to the less research-intensive institutions from 2005 (DfES, 2004). This funding led to a variety of initiatives. These have included the creation of posts such as the temporary part-time Research-Informed Teaching Projects Officer at the University of Staffordshire (University of Staffordshire, 2016), the introduction of whole departments, such as the University of Central Lancashire's Centre for Research-informed Teaching (UCLAN, 2016), and the embedding of the approach within universities' strategic plans, as for example Liverpool Hope's *Learning, Teaching & Assessment Strategy* (Liverpool Hope University, 2016). The funding for this initiative was phased out by 2013 (HEA, 2013, p. 3) to be replaced by the HEA initiative to integrate and support the development of Scholarship of Teaching and Learning into the sector (Fanghanel, Pritchard, Potter, & Wisker, 2016). Its mission is to audit and

integrate opportunities for research-informed teaching across the sector at an individual academic, departmental, institutional and national level.

Zetter (2002) believes that changes which occur at the departmental level have the most long-term impact, because it is the departments that organise and structure workloads based on their interpretation of their institution's strategy and policy documents. A departmental approach allows for targeted management, leading to change at curriculum and module level. This has a direct impact on the student experience (Jenkins & Zetter, 2003), and allows for more targeted staff development opportunities aimed at enhancing the nexus (Zetter, 2002). Another important reason to place the impetus for change at a departmental level is to take account of the varied nature of research within different disciplines. The pure sciences may focus on the processes, results and papers developed from detailed laboratory work, whereas disciplines linked to professions, such as education or social work, are more likely to focus on contemporary, applied case studies (Healey, 2005). Different professionals will also influence the curriculum content in order to meet the requirements for accreditation (Healey, 2005).

6.2.2 Models of research-informed teaching

Although there is much literature to support the adoption of research-informed teaching there does not appear to be a clear consensus as to its definition or function (Deem, 2006). Brew (2006b) gathered the interpretations of 220 academics internationally and found that their definitions of research-informed teaching fell into three different categories (Figure 6.1), which may affect how institutions and departments interpret and implement strategies.

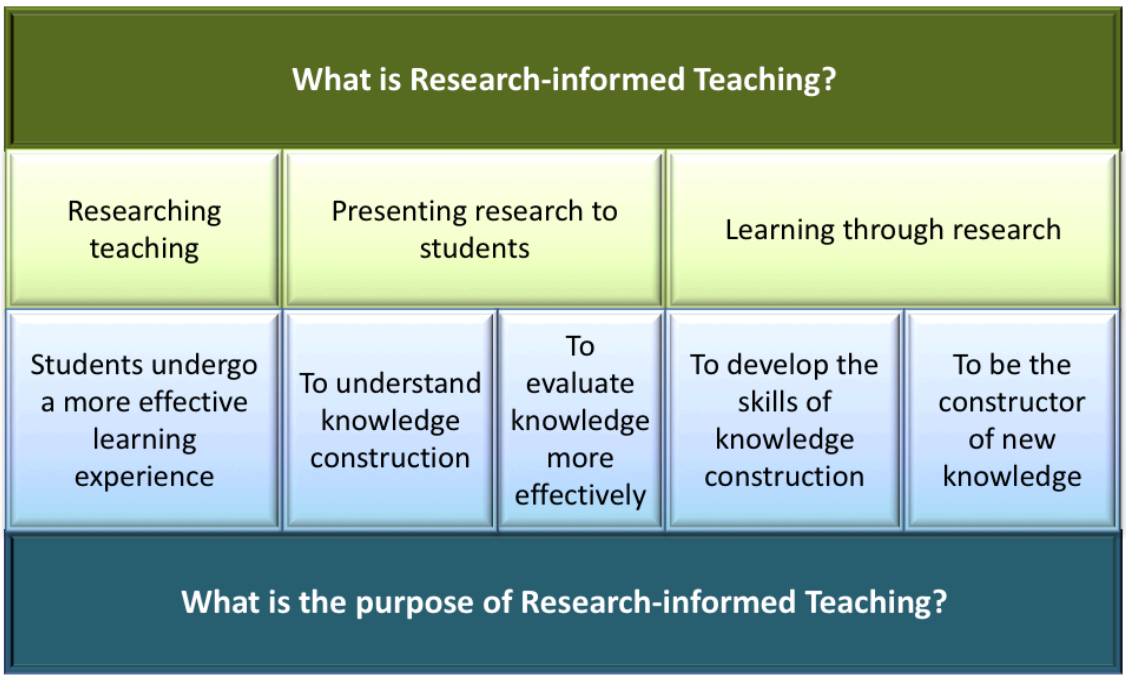

Figure 6.1 Definitions and purposes of research-informed teaching (based on Brew, 2006)

Research-informed teaching was originally defined by Griffiths (2004, p. 722) as teaching that "draws consciously on systematic inquiry into the teaching and learning process itself", whereas the interpretation of research-informed teaching is now much broader where, dependent upon the interpretation, its implementation has varying impacts on the student experience. As can be seen by Griffiths' interpretation of research-informed teaching, the impact is the potential improvement in students' learning through applying or undertaking pedagogic research; informing teaching practice.

The second interpretation is the use of research in the teaching environment to support points being made, which allows students to develop a deeper understanding of how knowledge is constructed, and enhance their evaluative skills. The third interpretation is the use of research methods to develop the students' skills as constructors of knowledge. Visser-Wijnveen, Van Driel, Van der Rijst, Verloop, and Visser (2010) extended this view of the nexus about knowledge and skills transfer, to include the lecturer as role model and motivator, leading by example.

6.2.3 Case studies of research-informed teaching

A review of university-based case studies has been applied to the Research in Teaching Assessment Matrix (previously discussed in section 3.5.4), to show how research-informed teaching has been implemented (Figure 6.2). It is evident that researchers have interpreted research-informed teaching as research activities based on the production of knowledge with most of cases falling into the *group interaction* field, and no papers highlighting passive ways of delivering research-informed teaching.

	Theory, application or policy (TAP)	Supporting research (SR)	Research methods (RM)
Group interaction (G)	**G-TAP** Spronken-Smith and Walker (2010)	**G-SR**	**G-RM** Spronken-Smith and Walker (2010) Bertolo (2009) Chang (2005) Deakin (2006) Webster (2002)
Lecturer interaction (L)	**L-TAP**	**L-SR**	**L-RM** Johnes (2004)
Active (A)	**A-TAP**	**A-SR**	**A-RM** Bertolo (2009) Brew and Jewell (2011) Fawcett et al. (2003) Zamorski (2002a)
Passive (P)	**P-TAP**	**P-SR**	**P-RM**

Figure 6.2 Research-informed teaching case studies applied to the Research in Teaching Assessment Matrix

Most interventions were research methods based, where students undertook research activities in groups (G-RM). These included student-led seminars (Deakin, 2006) and fieldtrips

offered within the department (Spronken-Smith & Walker, 2010), to more collaborative projects including an industry-student conference in forensic computing (Bertolo, 2009) and environmental health projects with a local council (Webster, 2002). Alternatively there were independent student activities focused on research methods (A-RM) such as offering individual students the experience of clinicians as researchers (Fawcett, Aber, & Weiss, 2003). Prospective health professionals were introduced to research techniques they could employ in their own practice, and there were examples of students offered researcher roles or scholarships (Brew & Jewell, 2011; Zamorski, 2002a), although the latter were necessarily limited in number, therefore not available to the whole cohort.

These interventions involved students at different levels (Table 6.1), with some projects actively integrating all undergraduate years in a vertical project (Webster, 2002). Others focussed on a clearly defined level, such as Bertolo (2009) postgraduate conference. Equally there was a clear distribution across discipline areas including students of ancient history and political communication, to nursing and endocrinology, with an equal balance between pure and applied, and slightly more hard than soft disciplines although not to a significant level (x^2= 1.167, df = 1, p = .28), suggesting that research-informed teaching can be integrated into any discipline.

	Hard	Soft	Total
Pure	5	2	**7**
Applied	3	4	**7**
Total	**8**	**6**	**14**

Table 6.1 The variation of disciplines publishing research-informed teaching case studies

Application of the matrix shows that the majority of the interventions reviewed focused on research methods in active or interactive modes (Figure 6.3).

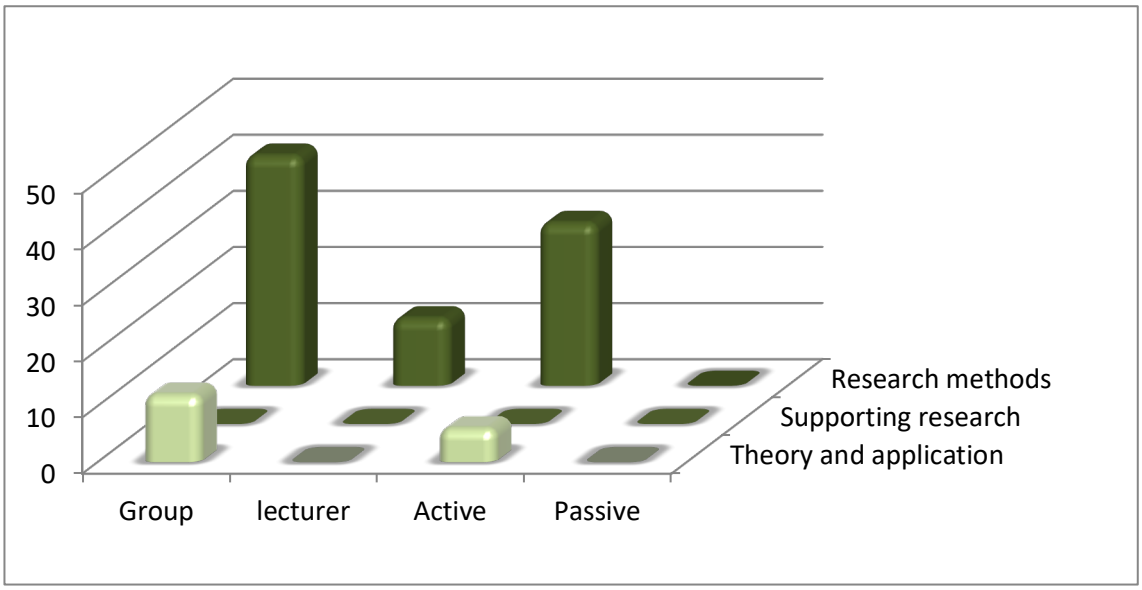

Figure 6.3 Proportion of university examples of research-informed teaching

Interestingly a report titled *Developing research-based curricula in college-based higher education* (Healey et al., 2014) includes 27 case studies from a similar number of UK further education colleges (Figures 6.4). What is clear is that no case studies from either the college or university sectors recommend passive approaches to delivery. All institution types favour research method activities (RM), either in groups or independently, but the main difference being that CBHE used activities to show how research supports theories (SR), which was not apparent in the university case studies.

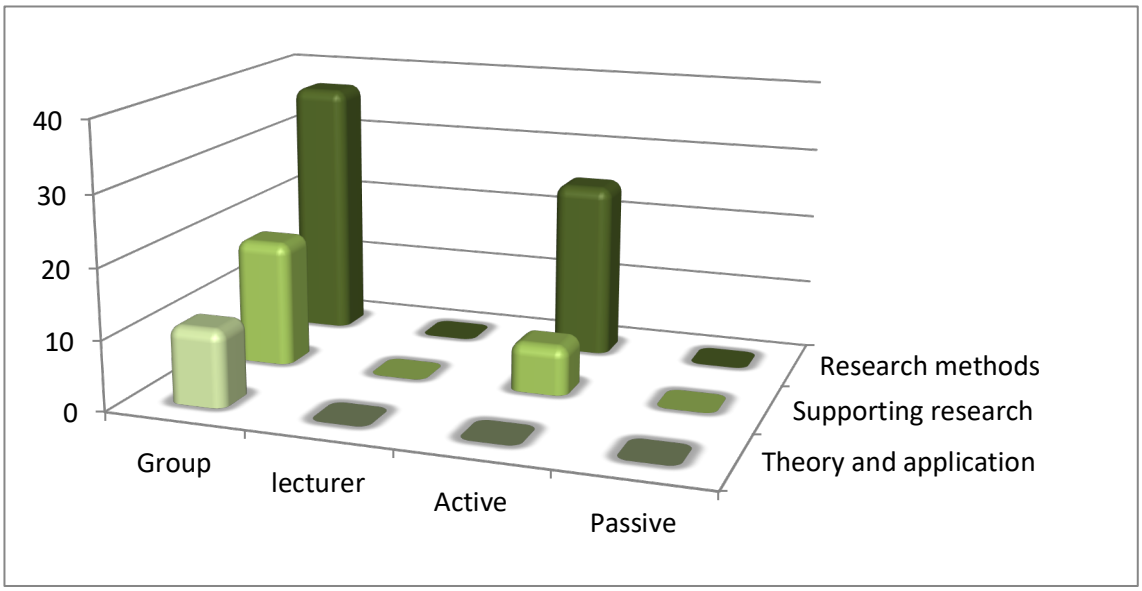

Figure 6.4 Proportion of CBHE examples of research-informed teaching

6.2.4 Conclusions

The literature suggests that many institutions and academics are striving to integrate research into the learning experiences, regardless of the discipline, student level or institution type, with an emphasis on levels of student activity and interactivity. How often such research-informed teaching occurs in the classroom has not been reported on. Within any programme the mix of modules, staff interests and curriculum demands generates a matrix of experiences for the students. Researching the students' lived experience of the nexus is limited. In order to evaluate how these research-led teaching experiences are encountered in the classroom, an assessment is made of students' daily learning experiences will be examined. The next section presents observational data derived from audio-recordings of lectures in order to establish whether there are any institution type differences in how research-informed teaching is delivered. See section 3.5 for a review of the Methodology employed.

6.3 RESULTS

Eight CBHE classes were recorded, where the average class ran for 72 minutes (SD = 15 minutes), and ten recordings received from post-1992 universities with an average class session running to 60 minutes (SD = 20 minutes). No data was obtained from pre-1992 universities.

The behaviours were assessed by time spent in the different modes. Examples of some of the types of data collected relating to the different modes can be seen in Table 6.2, but for definitions of such behaviours see Appendix 3.5 (Theory, Application and Policy), Appendix 3.6 (Supporting Research) and Appendix 3.7 (Research Methods).

Code	Quotation	Source
G-RM Group interaction Research methods	*"I'd like you to get into your groups and consider the strengths and weaknesses of the experimental design that you devised last week, and I will be round to discuss these points with each group"*	CBHE Cornwall
L-TAP Lecturer interaction Theory, application or policy	*"So can anyone tell me what social context is, and how you might apply this to language?"* *"Yeah, would that be like the word wicked – which really means evil, but in youth culture it means like cool?"* *"Absolutely. Here is an excellent example of social context with respect to subcultures"*	Post-1992 university Yorkshire
P-SR Passive Supporting research	*"This was tested through a lab experiment. The participants were divided into two groups and paired with what they thought to be another participant, but they were in fact confederates – stooges who were primed on what to do and say"*	CBHE Devon

Table 6.2. Exemplar quotations

6.3.1 Observations by institution type

The proportion of time that students spent in each learning mode demonstrates that CBHE students spent 30% of their class time engaged in *lecturer interaction* regarding *theory, application or policy* (L-TAP) such as classroom discussions, and a quarter of their time in *group research methods* activities (G-RM) (Figure 6.5). There were three areas out of the potential twelve where no activity was observed; these were *group* or *independent* activities linked to *supporting research*, and *independent* activity linked to *theory, application or policy.*

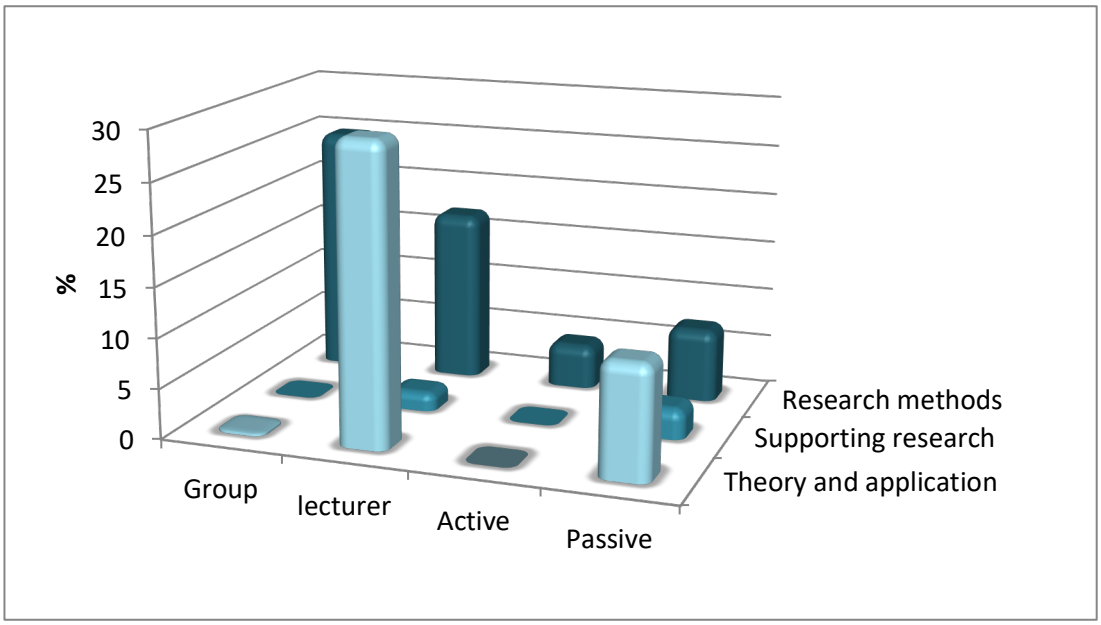

Figure 6.5 Research in Teaching Assessment Matrix applied to CBHE lectures

The pattern that emerges from the post-1992 universities is quite different (Figure 6.6) with 89% of the delivery being passive, and 56% of delivery being *theory, application or policy* (P-TAP). No observations were made of *group* activity in the delivery of *research methods* (G-RM) and *supporting research* (G-SR).

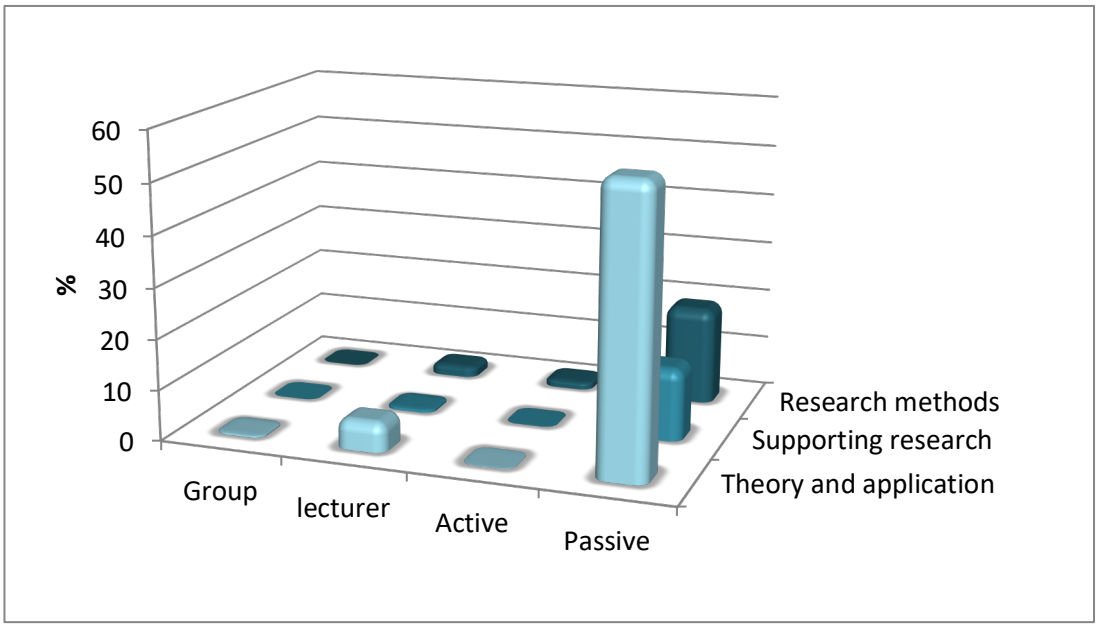

Figure 6.6 Research in Teaching Assessment Matrix applied to post-1992 university lectures

6.3.2 Institutional comparisons of taught sessions

Figure 6.7 shows significant institutional differences in the time spent delivering the different content (CBHE: $F_{(2,93)} = 3.56$, $p = .032$; Post-1992 university: $F_{(2,117)} = 4.28$, $p = .016$). CBHE lecturers spent less time referring to *supporting research*, whereas the post-1992 universities lectures spent more time referring to *theory application and policy* than research components.

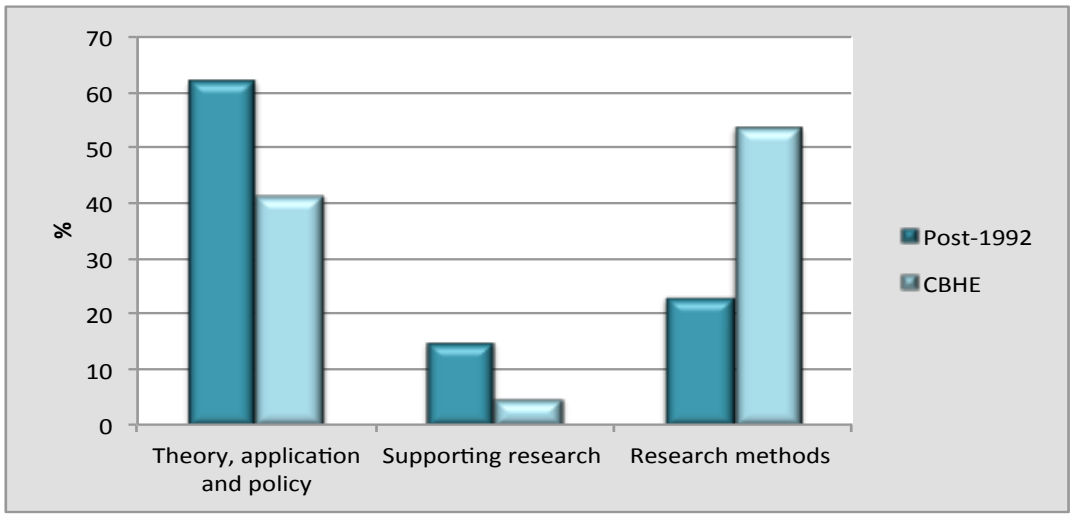

Figure 6.7 Proportion (%) of lecture time spent on different content

Figure 6.8 shows there were no significant differences in the time that CBHE lecturers spent in different forms of delivery ($F_{(2,92)} = 2.43$, $p = .07$), whereas the post-1992 university lecturers spent significantly more time in the *passive* style than the interactive styles ($F_{(3,116)} = 23.16$, $p < .0005$).

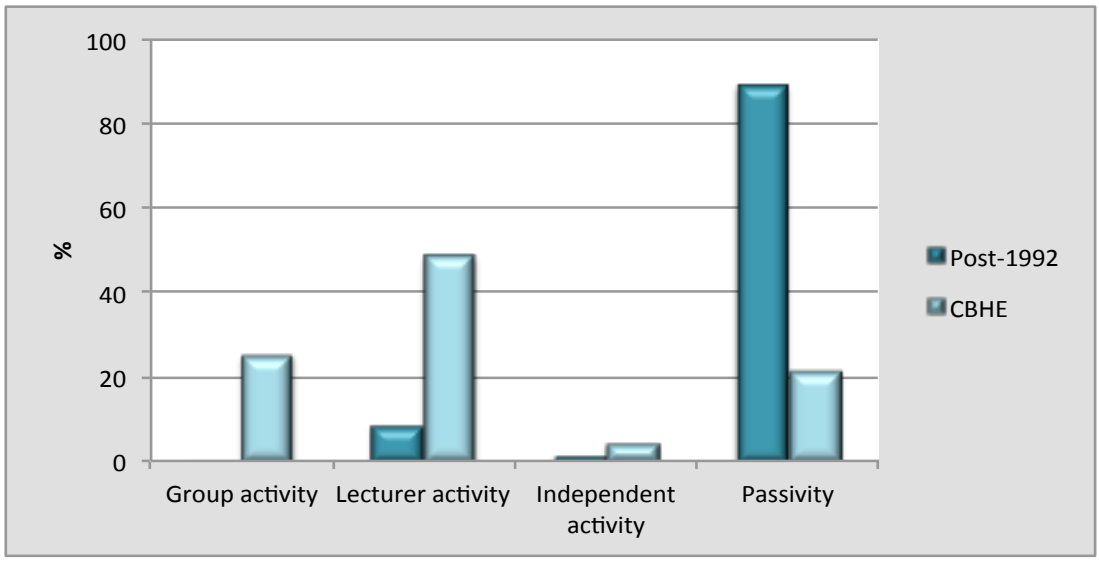

Figure 6.8 Proportion (%) of lecture time students spent on different activities

6.3.3 Qualitative reflections

Further to the quantitative aspect of the data, there were sectoral differences in the way that research was referred to within the teaching environment. Many of the references to research findings and methods, across all institutions, were to those of *other* researchers. There was barely a mention of personal research activities, with the exception of one post-1992 university lecturer who based the entire lecture around his one case study.

The second feature that stood out was the delivery of research methods classes, where all the CBHE provision observed was based on active participation, where students were either designing studies in small groups or analysing data sets under lecturer guidance. The post-1992 university experience was lecture-based provision with no practical experiences or activities observed.

6.4 Discussion

Much has been made of the need to ensure HE provision is based on research-informed teaching, and initiatives have been put in place to encourage this. The literature highlights successful innovative projects employing research-informed teaching, but what is missing from the literature is what happens outside of these special enrichment activities. The purpose of this study was to establish what does occur within the classrooms of different institutions.

6.4.1 CBHE classroom activities

CBHE lectures included a greater variety of delivery styles. The explanation for this may lie in the class sizes where colleges typically run on secondary school sized classrooms, due to their cultural background being Further Education, therefore less likely to have access to a lecture theatre. Surveys of over one hundred CBHE lecturers found that the teaching methods most frequently employed were experiential techniques appropriated from their FE practice, many perceiving lecturing to be inappropriate (Burkill et al., 2008). The benefit of small class sizes can make alternative methods a more viable option (Turner, McKenzie, & Stone, 2009).

If research is to be defined in the terms that relate to universities' typical research activities, as a process of winning funding bids, data collection and analysis, and subsequent dissemination, then the link from the self-reported levels of research activity presented in Chapter 5 are negatively related to the findings from the classroom observation of research-informed teaching. Although CBHE lecturers were the least likely to be research-active, a significantly greater proportion of their observed provision was research-informed. However if other non-contracted forms of research and scholarship are considered, such as the survey data showing that the majority of CBHE lecturers claimed to be research-active in others forms, this may explain why there is a greater amount of time engaging in research activity in the classrooms of institutions not known for their research culture. The observations demonstrated that during the observed period CBHE afforded students the opportunity to be more research-active within taught sessions, although spent less time indicating how research support theories.

This finding suggests that it is not vital for lecturers to be research-active, in the traditional sense, in order to offer a research-informed teaching experience, a factor that was deemed as important by CBHE lecturers (Turner, McKenzie, McDermott, et al., 2009). If observed CBHE sessions are delivering a higher proportion of research-informed teaching than the post-1992 university sessions, it suggests that contractual research-activity may not be the primary predictor of the degree of research-informed teaching delivered.

6.4.2 Post-1992 university classroom activities

The post-1992 university sessions observed showed less time engaged in active learning modes. This aligns with Lammers and Murphy's (2002) observations in American universities, which tended to use lecturer-driven, student-passive delivery mode most frequently. The post-1992 university sessions observed also showed less time engaged in research-informed teaching mode than the CBHE sample. The majority of post-1992 university staff reported being research-active, some through their contracted role, but similar to the CBHE lecturers,

some also undertook research not necessarily as part of their university job. This suggests that although most of the post-1992 university lecturers were research-active in one capacity or another, this may not necessarily be reflected in a taught session. When this is noted alongside the predominance of passive delivery observed in the university lectures, some explanation may be due to environmental restrictions, rather than the research activities of the lecturers. The Higher Education Policy Institute's Student Academic Experience Survey showed that university students were more likely to spend time in classes of over fifty students than those attending colleges (Buckley, Soilemetzidis, & Hillman, 2015). With psychology being such a popular undergraduate subject it is not unusual to have up to two hundred students in a lecture theatre, which can restrict the opportunity for interaction.

In addition to these constraints, the contracted status of staff in UK universities has also changed over the last twenty years. The pressure of the REF has led to more teaching-only contracts. The HESA (2014) data show university staff numbers had increased by 24% in the previous eleven years, whereas those employed on teaching-only contracts increased by 74% as less research-active staff were moved to these contracts. There has been an increased casualization of universities' teaching workforce with more staff on temporary or zero-hour contracts (Hunt, 2016), suggesting that these staff will not be research-active. This shift in the balance of time available for research has the potential to lead to greater emphasis on scholarly activity, and fewer primary research-active staff role modelling the nexus through to publications.

6.4.3 Sectoral comparisons

Continued argument for the need to be research-active to be an effective teacher requires consideration of several factors. Firstly, that the means of assessing higher education quality assurance has shown equivalence between college and university provision, with CBHE providing HE with equal rigour to their university counterparts, as confirmed by the external examiner system, and with equal levels of student satisfaction for over a decade. This does not

suggest that the student experience is the same, but the academic standards are equivalent, without CBHE lecturers needing to undertake research. A second consideration is that there has been no explicit acknowledgement within the literature as to what element of research activity is the active-ingredient that enhances the student experience (Barnett, 2005). The much argued point is that research-active staff are more current in their understanding of the discipline (Robertson & Bond, 2001). This is problematic for two reasons; firstly, not all university teachers are research-active, and secondly that those who are research-active do not necessarily undertake research in their discipline. This was found to be the case with the post-1992 university lecturers' survey data (section 5.3.1), where a quarter of the respondents reported being employed on teaching-only contracts, and according to the review of publication patterns data, post-1992 university lecturers tended to be engaged in pedagogic rather than discipline-specific research. Even if lecturers are researching within their discipline it has been argued that the finite focus of their research topic, and the time that each project absorbs, may reflect little more than a footnote in the taught curriculum (Smeby, 1998), which often requires a boarder level of understanding at undergraduate level. This suggests that scholarly activity may offer more currency to undergraduate teaching than discipline-specific primary research.

If one looks past the contractual arrangements for CBHE staff, it is evident from the survey (section 5.3.3) that only 14% are not research-active as the majority claim to undertake research outside of their role or are engaged in further study, a pattern not dissimilar to that of post-1992 lecturers' research activity. Boyer's (1990) Model of Scholarship may explain how the different sectors ensure that research-informed teaching is delivered based on their contractual and cultural differences. The framework encompasses traditional research through the scholarship of discovery as well as the scholarship of teaching, pertinent to both CBHE and post-1992 sectors due to their pedagogical focus. This is becoming an issue of greater concern with the advent of Taught Degree Awarding Powers being opened up to FECs, where advanced scholarship is a requirement, although the interpretation of scholarship is more akin to that of

Boyer as it may include research activities (scholarship of discovery), commercial activities (scholarship of application), professional activities (scholarship of integration) or personal practice (scholarship of teaching) (QAA, 2013).

It should be noted that the published university-based case studies of research-informed teaching initiatives are more research-focused in their content than the lectures observed for this study, which were more theoretical (Figure 6.9).

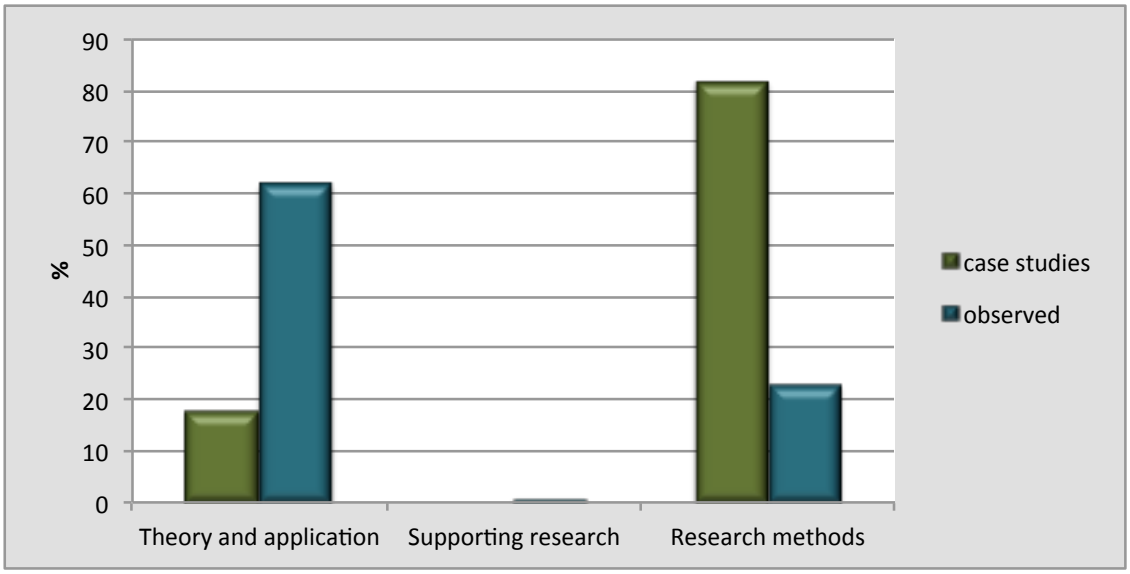

Figure 6.9 Comparison of lecture content between university case studies and observations

The data here is in contrast to the literature, where the university case studies favoured more interactive styles of delivery whereas the lectures observed were predominantly passive (Figure 6.10). This may suggest that lecturers see the value in using more interactive methods of delivery but either see it as a risky venture (Gresty, Pan, Heffernan, & Edwards-Jones, 2013), or are restricted by more practical aspects such as time or class size.

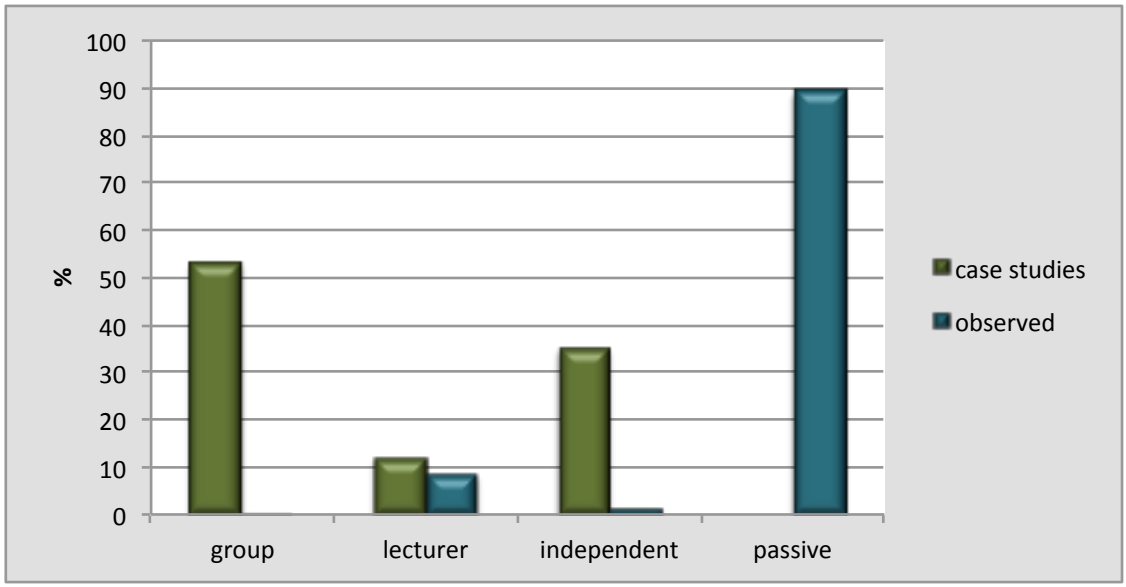

Figure 6.10 Comparison of lecture activities between university case studies and observations

The patterns emerging from the CBHE provision better reflect the CBHE case studies, where 62% of the case studies focused on research methods, as did 54% of the observed lectures (Figure 6.11).

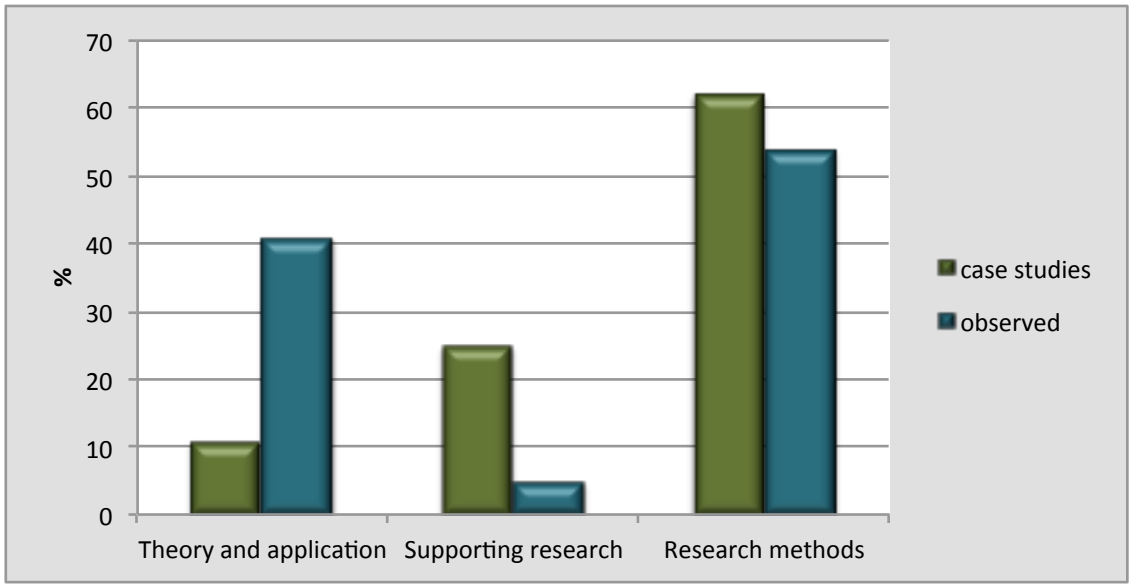

Figure 6.11 Comparison of lecture content between CBHE case studies and observations

The differences mainly lay in the class activities which were more often group based in the case studies, whereas in practice there were more discussions with lecturers (Figure 6.12).

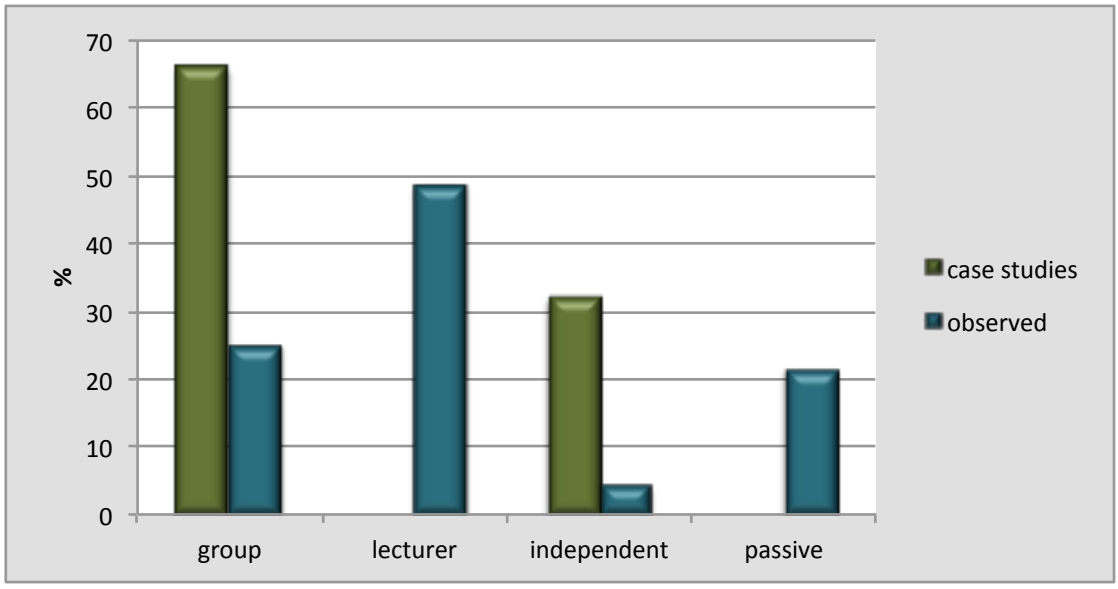

Figure 6.12 Comparison of lecture activity between CBHE case studies and observations

If it is not necessarily the traditional research-activity of lecturers that is important in the provision of research-informed teaching, then it may be beneficial to look at the size of the classes being taught. The gradual increase in the number of students entering HE has been managed in two ways. CBHE have expanded their provision, initially by expanding the range of courses, and more recently by level, through to final degree and Masters level. The second form of absorption has been through the massification of university courses where the majority of contact time is through mass lectures. Dealing with large groups in lecture theatre settings may restrict the possibility of interactive sessions.

The drive for massification appears to be on the wane (BIS, 2015), with the students' voice being heard regarding lecture theatre delivery. With tuition increased fees, a value for money ethos is emerging, and students are indicating that contact time and learning resources should be invested in through trained and qualified staff and smaller class sizes (Kandiko & Mawer, 2013). In addition, negative correlations have been observed between class size and students' perceived value for money, and a positive correlation between contact time and perceived value for money (Buckley et al., 2015), although time in the classroom does not necessarily equate to a quality learning experience. In a National Union of Students survey (NUS, 2012), 90% of respondents claimed that teaching quality was the most important factor

of the teaching and learning experience, half of the students claiming that this would be achieved through interactive teaching, whereas less than half indicating that the lecturers' research record was important to them. Where the sectors differ regarding teaching is through the underlying approach to pedagogy. CBHE lecturers are required to have a teaching qualification, such as a Postgraduate Certificate of Education or Certificate of Education. These qualifications involve demonstrating of theoretical knowledge as well as successful completion of observed teaching practice. This process ensures that lecturers will have achieved and maintained a level of proficiency in teaching. This is not necessarily a requirement of university lecturers, although many universities choose to make it a requirement through the Postgraduate Certificate of Academic Practice, and which will normally involve mentors observing teaching practice. What may then separate the university sectors regarding teaching practice is the greater numbers of post-1992 university lecturers publishing pedagogic research (80%) as seen in section 5.3.3. This creates an interesting dichotomy where the most popular universities are those that are higher in the league tables, but in order to secure such a prestigious reputation higher levels of research quality and impact need to be achieved, which has been argued to negatively impact on teaching quality (Fazackerley, 2013).

In response, a recent Government white paper acknowledged that "for too long, teaching has been the poor cousin of research. Skewed incentives have led to a progressive decline in the relative status of teaching as an activity" (BIS, 2016a, p. 12). To deal with this disparity the Teaching Excellence Framework (TEF, 2016a) was trialled in 2017 to complement that of the REF in an effort to raise standards (BIS, 2016a). One explanation for the recent drive for quality is the introduction of increased tuition fees, through which the educational provider is required to adhere to the Consumer Rights Act (2015). As the supplier of educational services to the consumer, HE institutions must comply with this act, meeting the minimum standards that allows TEF submissions (Neary, 2016). It has been proposed that the real role of the TEF is to open the market further to new private providers, and the potentially problematic outcome is the incentive of allowing fees to be increased alongside "good

teaching provision" with the by-product of encumbering students with higher levels of debt or making HE unaffordable to some (Grayling, 2016). Proponents have argued that there should be a decoupling of fees from the TEF as it has been seen as a stealth opportunity to remove the fee cap (Forstenzer, 2016).

6.5 Conclusion

Although the data captured is limited, it has allowed for an assessment to be made of a typical week of 2nd year psychology students across four institutions from two sector types. The data captured represents different modules taught by different lecturers giving an overview of the student experience. Although only two institutions were examined for each of the two sectors, patterns between the overall experiences within each institution types were similar, whereas the provision between the two HE providers were more distinct suggesting that there are methods and approaches that reflect the sectors to some degree.

When considering research-informed teaching approaches, the observed CBHE classes tended to include more research-based delivery, whereas the post-1992 sessions were more research-led (Griffiths, 2004; Healey, 2005). It was found that CBHE lecturers spend more time on interactive delivery which has the potential for deeper learning (Biggs & Tang, 2007).

Both CBHE and post-1992 university lecturers reported spending more time than contracted on research outside of their role, including taking higher qualifications and working with clients. It may be that this amalgamation of forms of scholarship (Boyer, 1990), through their focus on pedagogic research (scholarship of teaching), their work with clients (scholarship of application) and their other research activity (scholarship of discovery) provide the conditions for research-informed teaching.

The implications of this, if it were to be observed in more substantial studies, is that traditional research-activity may not be a prerequisite for research-informed teaching, with an

impact on both sectors, acknowledging the role that other forms of scholarly activity bring to the classroom.

Although various patterns of research-informed teaching have been observed being delivered within the classroom confines within one discipline, such data gives no indication of how students receive such input. Therefore in order to establish what impact research-informed teaching may or may not have on the student experience, students' attitudes will be examined in Chapter 7.

Chapter 7

Students' Experiences and Perceptions of Lecturers' Research Activity

7.1 Introduction

Having considered policy drivers and institutional implementation of the teaching-research nexus through research-informed teaching, it is important to consider whether students are aware of their lecturers' research activity. An understanding of students' perceptions may help HE lecturers and managers understand the impact of research-informed teaching on learning and the student experience.

This chapter examines the current literature regarding students' experiences of lecturers' research activity before presenting the findings of focus groups undertaken with thirty students from seven different disciplines at two FECs, and ten students from five different disciplines at two post-1992 universities, in order to establish *to what extent do students at different institution types perceive and experience lecturers' research differently?*

7.2 Review of literature

7.2.1 Students' understanding of the concept of research

The definition of research is dependent upon the role of those defining it. Students attending a range of post-1992 universities tended to define research as activities, such as reading and

inquiry leading to deeper understanding, whereas lecturers' definitions focused on primary investigations to create new knowledge (Buckley, 2011). Discipline type may play a role in such perceptions. Robertson and Blackler (2006) found interesting differences in the students' definitions of research when comparing New Zealand undergraduate students studying physics, geography and English. The physics students saw research as something undertaken by a select few academics, and done to a higher level than they could aspire to; the purpose of this research was for ground-breaking new discoveries to be made. The perception of the geography students was not as remote as the physics students' view. They considered research as an activity often carried out in the field, where their lecturers sought answers to clearly defined questions. This was different to the interpretation of English students who saw research as the bringing together of areas of interest, and often involving themselves in the process of research. From such diverse perspectives it is easy to see that the integration of research into teaching is not viewed equally between the disciplines (Neumann, 1992; Smeby, 1998).

7.2.2 Students' awareness of staff research

Surveys of Australian undergraduates suggest that students have some awareness of research being undertaken by staff at HEIs although this did not necessarily mean that they were aware of lecturers' specific areas of interest or current projects (Stappenbelt, 2013). Healey et al. (2010) suggested that awareness of research occurs after students are enrolled, indicating that their original application was not directly based on the institution's research reputation. Generally students' awareness and experiences of research increase during the course of the undergraduate journey (Spronken-Smith et al., 2014). A survey of students at one post-1992 university indicated that only 40% were aware of their lecturers' research activity (Healey et al., 2010), another study having found that students only tended to be aware of their own lecturer's publications rather than institutional research activity (Turner, Wuetherick, & Healey, 2008).

Students at a post-1992 university stated that awareness of research activity was gained from departmental notice boards, and they were aware of staff doing research degrees (Short et al., 2010). Undergraduates at less research-intensive universities (Turner et al., 2008) tended to be unaware of the internal structural components such as research units, or external factors such as international reputations, although those from research-intensive institutions had greater awareness of lecturer research activity than students at less research-intensive institutions.

7.2.3 Students' experiences of staff research

Studies that have sought students' views about their *experiences* of research have found that students who did indicate an awareness that their institution was famous for its research lacked experiences of it. Their awareness tended to be a partial view through lecturer-student communication, rather than a holistic integrated experience (Zamorski, 2002a). Where lecturer's research has been experienced, this was most commonly through discussions with lecturing staff about student projects, but they were unlikely to have read a paper published by their lecturer (Jusoh & Abidin, 2012; Short et al., 2010). Other studies have shown that students rarely felt that they had contributed in any way to a study (Turner et al., 2008), supported by other survey findings that only 8% of students had participated in research, and 5% had contributed to a research output (Healey et al., 2010). When students did refer to involvement in lecturer's research they did so with an underlying lack of ownership (Buckley, 2011). But where explanations have been sought from lecturers as to why there is not more involvement of students in research, they claim that they are constrained by time and the curriculum (Buckley, 2011).

7.2.4 Students' perceptions of staff research

Students believe the benefits of staff undertaking research to be an increase in lecturers' knowledge currency (Lindsay et al., 2002), and that staff were more enthusiastic and had an increased understanding of the topic and research methods (Healey et al., 2010). Students also

felt that research activity enhanced staff credibility, and were perceived as a more competent project supervisors (Lindsay et al., 2002). Students at research-intensive institutions claimed that the research-activity of staff stimulate student interest, enthusiasm (Short et al., 2010; Turner et al., 2008) and understanding (Levy & Petrulis, 2011), although this was not the case for students' grasp of research methodology (Visser-Wijnveen, van Driel, van der Rijst, Visser, & Verloop, 2011). Ball and Mohamed (2010) reported that 80% of their student respondents believed that lecturers should use examples of their research within their teaching practice.

Three commonly emerging themes are the perceived lack of availability of lecturers due to their research commitments (Ball & Mohamed, 2010; Short et al., 2010; Stappenbelt, 2013; Turner et al., 2008), a distortion of the curriculum where there was too much focus on a lecturers' own research interests, and the students not feeling that they were a valued stakeholder in the research process (Healey et al., 2010; Jenkins et al., 1998). Zamorski (2002b) found that there is a gap between an institution's policy on research-informed teaching and practice, where students felt excluded from the research activities of the university, or were ambivalent about the benefits they reaped (Stappenbelt, 2013). Lindsay et al. (2002) found that this experience did tend to disappear with postgraduate study, where the links between research and teaching become more overt, with PhD students feeling that they had a stake in the research activity of their supervisors.

Lindsay et al. (2002) used focus groups to establish students' perceptions of research and teaching. They found that as the degree of institutional research-activity increased so too did the number of positive student statements about research, indicating dissemination of their research activity to the student body was occurring in a meaningful way. When the results were analysed by student level, it became clear that undergraduates reported that research outputs had a negative effect on their taught experience, rather than enhancing it. This was not the pattern observed with postgraduate students. Here they found that research-intensive departments recorded more positive statements regarding research. This may be the product of the students' level and mode of study being more closely aligned to the work of the

lecturer.

Factors that might affect students' perceptions of lecturers' research activity include their own motivations for undertaking a HE course (Breen & Lindsay, 1999). According to Self-Determination Theory, motivation can be broken into two orientations; intrinsic and extrinsic (Ryan & Deci, 2000). *Intrinsic* motivation is the drive to follow a path for the experience itself. This may be the love of learning, the drive to acquire new knowledge or to master new skills. In contrast *extrinsic* factors are the drive to take a course of action, but not for a satisfaction related to the activity itself (Ryan & Deci, 2000). These drivers may affect the students' view of lecturer research with extrinsically motivated students focussing on their achievement of the qualification and their employment potential. Breen and Lindsay (1999) found that students who were extrinsically motivated were not interested in knowing more about their lecturers' research, and were indifferent to conducting research themselves. An alternative stance was held by those who were intrinsically motivated, who found the course satisfying, felt involved in the department, were interested and wanted to be involved in their lecturers' research. If one considers the differences in student motivation, it suggests that research findings based on students' view or expectation on the inclusion of research in the taught experience needs to be considered carefully.

The research reported in the next section details students' awareness, experiences and perceptions of their lecturers' research activity as a means of understanding the impact of research-informed teaching. See section 3.6 for a review of the Methodology.

7.3 Results

7.3.1 Thematic analysis

Data from the twelve focus groups was examined through thematic analysis (Table 7.1). In addition to the requirement to define research at the outset, the awareness, experiences and perceptions of lecturer research was investigated, as was the impact that research activity had on their views of their education.

Theme	Codes
Definition of research	• Knowledge acquisition • Testing a research question • Challenging knowledge
Aware of lecturers' research activity	• Unaware of research activity • Unaware of research activity, but assumes it occurs • Aware of research activity • How students became aware
Experiences of lecturers' research activity	• Experiences of research activity • No experience of research activity • Interested in being involved in lecturer research • No interest in being involved in lecturer research
Impact of lecturers' research activity	• No educational impact from research activity • Previous research experiences are more important • Practical/vocational experience is more important • Research experiences to share with the student • Research experiences increase currency • Scholarly activity is sufficient • Scholarly activity is insufficient • Lecturers' have insufficient time to dedicate to research
Aware of lecturers' studying for further qualifications	• Aware of lecturers studying • Unaware of lecturers studying • Feelings regarding lecturers further study • Context of disclosure
Factors affecting institution choice	• Location • Course • Reputation

Table 7.1 Themes generated from the focus groups

7.3.2 Definitions of research

The first question posed to each focus group was to identify their individual definitions of the term *research*, as research formed the basis of all the subsequent questions. The responses fell into three different categories; the *acquisition*, *testing* and *challenging* of knowledge. Knowledge was either referred to at a *primary* level, in that the reference was to data collection, or at a *secondary* level, where reference was made to interpretation of previously published work (Table 7.2).

The acquisition of knowledge was mentioned in most of the focus groups and referred to the students' own acquisition of knowledge through secondary sources. The responses were often based around their own study activities such as reading, generally books and journals, and places such as libraries.

Discipline areas	University courses	College courses
Computing	Secondary	Secondary
Biology	Secondary	Secondary
Psychological	Primary	Primary
Health practitioners	Primary	Secondary
Criminal justice	Secondary	Secondary

Table 7.2 Cross-institutional interpretation of the term *research*

The responses are typified by this quotation from a counselling student *"just reading more books, and yeah, and keeping up-to-date with the studies"* all reflecting secondary research processes. Another interpretation of the concept of primary research was through the process of *testing* a research question, although two-thirds of these responses were made by psychology students, possibly indicating how research is represented on such courses, with references to scientific concepts and methods of investigation. In contrast the view of counselling students was that research was to challenge information, knowledge being seen as temporary.

Students' definitions of research were not affected by institution type, but were more aligned to discipline. The psychology students referred to research through scientific language, regardless of institution. The computing and biology students interpreted the term with reference to their own secondary research activity, such as this response from a computer science student, *"research is information data that you use to base your conclusions and writing on in your assignments".* Students in the applied disciplines, those working in the criminal justice and health sectors, were also more likely to interpret the phrase as secondary research.

7.3.3 Awareness of lecturers' research activity

The respondents offered three types of responses about their awareness of their lectures' research activity, an *awareness*, a *lack of awareness*, or *unaware but assumed*. The responses as to their awareness were more likely to be aligned to institution type (Table 7.3). All groups of university students were aware of research activity occurring at their institutions with the exception of the computing students, who assumed that it occurred. Biology and public service CBHE students were unaware of research activity occurring at their institutions, whereas respondents from both psychology groups indicated that they assumed lecturers were research-active. There were also those from some focus groups that were aware that research was being done, but were quite vague on the specifics of this. This response, from a counselling student, typifies their depth of knowledge *"I think [name] did once when he mentioned he'd written a book or something"*.

	University courses	College courses
Computing	Unaware but assumed	Aware
Biology	Aware	Unaware
Psychological	Aware	Unaware but assumed
Health practitioners	Aware	Aware
Criminal justice	Aware	Unaware

Table 7.3 Cross-institutional awareness of research

Some lecturers were quite effective in communicating with students what projects they were currently involved in. Although the students that were made aware of their lecturers' research activity did not always feel that its communication was helpful. Here a CBHE computing student compares two lecturers; one research-active, the other not:

> *He [non-research-active lecturer] can provide us with information that's relevant but doesn't go off on a complete tangent, whereas [research-active lecturer] knows it but the information he tells us can side-line off into something that is sort of relevant but not directly relevant to our work but is may be relevant to the field.*

There did appear to be institutional differences in how research was introduced in to the taught session. University psychology students claimed that *"most of them have mentioned it in passing"* whereas some integrate it more into the module, such as this university criminal justice student's experience, *"he's just written and published a book on that… it was on our reading list"*. The CBHE students' awareness tended to be in the context of the research activities that the students themselves were currently undertaking. The information communicated by their lecturers was about the lecturers' personal experience of research, and not the findings of their studies, reflecting the finding of the classroom observations (section 6.3.2). The students indicated that research had been introduced to support a learning process, as shown by this healthcare practice student, *"Yes their experiences, what they found difficult and what they found easy. Its advice, its advice about how to do it as well"*.

7.3.4 Experiences of lecturers' research activity

As so few students were aware of lecturers' research activity, even fewer had been involved (Table 7.4). Only two groups of students had volunteered and subsequently became involved in lecturer's research projects; CBHE computing students and university biology students, although these were experienced in different contexts. The computing students were participants in a survey whereas the biologists were research assistants working in the field alongside their lecturers where they felt invested in the project, *"It's quite exciting because you know you are part of something bigger. This year we've done some experiments looking at bacteria"*.

	University courses	College courses
Computing	No experience	Participants
Biology	Research assistants	No experience
Psychological	Mandatory participation	No experience
Health practitioners	No experience	No experience
Criminal justice	Mandatory participation	No experience

Table 7.4 Cross-institutional experiences of lecturers' research activity

University psychology students had been part of research studies although not on a voluntary basis, but through a penalty-enforced credit system, *"I don't mind. The option was to write a really boring essay,"* although some students turned this to their own advantage:

> *I use it, yes I'm being a guinea pig, but I'm looking at what they've done thinking 'well that's a crap question' its picking holes in stuff so when I come to do something like that… It might not be perfect but hopefully I won't make the same mistakes that they made.*

However, CBHE psychology students indicated that they had not been part of any study but suggested that they would have liked to, stating, *"it would be great for us to kind of be involved in that part of knowing the lecturer has really delved in to something".* This was not the case universally. University-based computing students were not interested in lecturer research as their focus was on their studies, whereas CBHE health practitioners were adamant that they did not wish to be part of other people's research because research took so much time to conduct they would not experience the whole process, and therefore would not benefit from it.

7.3.5 Perceptions of lecturers' research activity

There were no discernible patterns between the students' awareness and experiences or their perceptions of lecturers' research-activity (Table 7.5). Students who had not been engaged in lecturers' research activity did not feel that this had had any detrimental effect on their education, a view was expressed by this university-based computing student, who responded by saying, *"no it doesn't affect our course in any way. It's not going to affect my grade at the end of the year so (laugh) that's all I care about".*

CBHE psychology and criminal justice students claimed that scholarly activity is sufficient, making direct comparisons between those lecturers who were and those who were not research-active. They suggested that the skills required to undertake the tasks were different, so being good at one does not necessarily lead to being good at another. Many admitted never having thought about it until the question had been posed, insisting that

	University courses	CBHE courses
Computing	Lack of research input had no impact on their educational experience	Lecturer research activity added currency
Biology	Practical and previous research experience is important	Lack of research input had no impact on their educational experience
Psychological	Research adds skills, currency and approachability, although it must be relevant to what is being taught	Lack of research input had no impact on their educational experience, scholarly activity is sufficient due to lecturers time constraints, although it would add currency
Health practitioners	Practical experience is more important	Previous research experience is important as it adds currency although acknowledge lecturers' time constraints
Criminal justice	Knowing about lecturer research activity would make them seem more approachable, but research brought into lectures must be relevant	Practical and previous research experience is important, but scholarship is sufficient

Table 7.5 Cross-institutional perceptions of lecturers' research activity

scholarly activities were important, as long as the lecturer keeps up to date with the current theories, findings and practices within the discipline, then this was sufficient. As this applied psychology students states, *"No, I think as long as they are teaching you what you are on the course to be taught then I don't think it matters how they got that information".* Their explanation for this was often related to lecturers' time constraints as shown by this Healthcare Practice student:

> *I don't think it's realistic to expect them to have time to carry out primary research, and I don't know if they really necessarily need to. Just doing the secondary research is what they really need to teach us. It's unrealistic to expect them to do the primary research. I don't know how would be useful to us really.*

At the more extreme end of the scale was their perception of the impact that lecturers' research-activity might have on their own learning experience, as expressed by this CBHE applied psychology student:

> *There's a lot more potential of you becoming a worst lecturer sometimes if you're researching because you might think 'I need to do this' because you need it for my qualification. And sometimes they could possibly be a neglect of the students and their outcome of their qualification.*

No mention of time constraints was made by any university students.

Although some students saw that there might be timing implications if their lecturers were to have first-hand knowledge of all that they teach, they did recognise the benefit in having research-active staff. Psychology students from both sectors and CBHE health practitioner and computing students indicated that lecturer research activity added currency to the course, although university psychology and criminal justice students suggested that research should only be introduced if it has relevance to the topic being taught. The students also thought it would be beneficial in terms of the experiences that could be passed on to them. These benefits were often with reference to assisting the students with their research projects as shown by this public services student's view of their lecturer, *"She's the one that teaches research methods and we know what she's done in the past, so she knows what she's talking about".*

The only real negative view from the university students were from those who undertook psychology modules who felt that although required to undertake research for course credits, these lecturers did not disclose information about their own research in the learning context, and that they felt that this, in turn, made them less approachable:

> *Psychology tends to be very dry – right here's the PowerPoint blah, blah, blah. You don't get a sense of that person. That's a thing I have found that the criminology lectures bring their lectures alive by bringing in past experiences and discussing things that have happened when researching.*

Other professional experiences were deemed as important across both sectors, where *previous* research experience was acceptable to CBHE health practitioner and criminal justice students as well as university biology students. They wanted to be assured that their lecturers

were up to date with their continuing professional development, rather than being research-active.

7.3.6 Lecturer qualifications

To capture all forms of research activity students were asked whether they were aware of their lecturers undertaking higher qualifications. All of the groups, except the CBHE criminal justice students, were aware of lecturers undertaking further qualifications, although they were rather vague as to what was being studied, but they liked the idea in principle as they felt it increased lecturers' credibility. The students felt they benefitted through the sharing of the learning experience and the inspiration it gave them to continue their own studies, as put by this college health practitioner student:

> *That gives us an insight into how much work you really need to do, to get to where you want to get to, be it a degree, a diploma or masters and doctorate, you know whatever way. It's still an insight into opportunities that are out there, as students we can see how we can carry on and progress through the route really. So the person is doing it is really good at feeding back, and how it opens up opportunities too.*

The university student responses to this question were framed differently. The university students indicated that they were being taught by PhD students, whereas the CBHE respondents stated that their lecturers were undertaking PhDs. Essentially both were tasked with teaching undergraduates, but the students' perception differed as to whether the lecturer was considered to be a student who taught, or a teacher who was learning.

7.3.7 Institutional reputation

When questioned as to why they decided to study at their chosen institution, location was key, often to avoid relocating. Where there was divergence it related to institution type rather than discipline. Those choosing CBHE focused on the teaching and learning reputation, often through word of mouth. University students tended to rely on The Times and Guardian league tables to inform their decision. When asked what aspect of the league tables were most important to them it was student satisfaction and postgraduate employability, although it should be noted that the focus groups were undertaken prior to the TEF so this may be used as

a comparison tool for future generations of students. No students indicated that the research reputation had any impact on their choice of institution or course.

Conversations around the concept of reputation referred to it being built in many ways. For some it was their experiences of having already studied at the institution, for others it was personal recommendations, often with a sceptical view of institutional marketing.

7.4 Discussion

The purpose of this investigation was to establish what levels of awareness, experiences and perceptions students have of their lecturers' research activity within their educational institution, and whether these experiences differ based on institution type. From the focus groups it is evident that the students' understanding of the term *research* was more diverse than Buckley (2011) suggests with many more attributing primary than secondary features. There appears to be a general awareness of research-activity, but limited experiences of this at first hand, and various explanations as to how students perceive the research activity of their lecturers.

7.4.1 CBHE students' experiences and perceptions of lecturer research

The CBHE students indicated an awareness of research activity, or at least assumed it went on, with two focus groups suggesting a total lack of awareness, but there was little comprehension as to what the research activity was. As shown in section 5.3.3, many CBHE lecturers are undertaking further studies so it may be that this is the research activity to which they referred, rather than commissioned research. Participants in only one CBHE focus group had actually experienced the research activity, being participants in a survey.

The CBHE students did not indicate that this lack of involvement in research activity had any negative impact on their education. They concluded practically that lecturers were too busy with teaching-related duties to undertake research, and that any research undertaken would be too focused, and therefore offer limited meaningful input to the teaching situation. If

lecturers' research activities were to be included as part of the learning experience, the students claimed it would take too long to see a project through to its conclusion, and would rather that lecturers' focus was on lecture content through scholarly activity.

The positive outcomes of lecturer research were from lecturers discussing problems that they encountered and overcame, which the students claimed made their research methods activities more real. They also viewed lecturers who were undertaking higher qualifications, as inspiring, acting as a role model to their academic futures.

7.4.2 Post-1992 university students' experiences and perceptions of lecturer research

All post-1992 university focus groups indicated an awareness of lecturer research activity, with only one group working purely on an assumption. One group had an immersive experience as research assistants, two groups being required to participate and two groups having no experience of lecturer research activity. The data from this study suggests that being taught at a research-active university does not necessarily lead to a higher level of awareness from the classroom situation, but students are more likely to experience research through either research opportunities or mandatory inclusion as research participants. Mandated requirements for students to act as participants in research may increase their lack of ownership over research projects as suggested by Buckley (2011).

7.4.3 Sectoral comparisons of student experiences and perceptions

Discipline was as much a predictor of attitude as the experiences. Even where the students deemed research activity as important, the reasons given for this were various. For some it was the belief that their teachers would be better informed, suggesting a current and credible knowledge base as found by Lindsay et al. (2002). For others it was a process factor, that research-active lecturers would be better supervisors of their research studies, enhancing their skills and potential grades. The research-activity did not have to be current, for many, previous research activity would suffice. Those from the more vocational courses felt that practice-

based experience was more important to them than research activity, as found in other university-based research (Stappenbelt, 2013).

For many research was unimportant and potentially a distractor. They would prefer a lecturer that focuses on their educational needs, and scholarly activity was all that needs to be in place for this to occur. Their logic being that as lecturers have undertaken higher-level qualifications they then know how to absorb and translate the necessary knowledge, and have undergone research activity to have acquired these skills, as found by Stappenbelt (2013).

The university data was collected from two universities mid-ranked in the REF2014 tables, both of which had moved up the tables since the RAE2008, suggesting that they were relatively research-active, although not research-intensive. These institutions would contrast culturally from the colleges to which they were compared, but the views were not conclusively different. Although it was evident that many lecturers were research-active, the nature of this activity was not generally transmitted within lecture. The exception was criminology lecturers who were recognised as integrating their research into lectures. It appears that it is the translation of theory into real life situation, and the skills to communicate this, that students see as the important skills of a lecturers, rather than their research-activity *per se* (Su & Wood, 2012).

7.5 Conclusion

Summarising all the focus group results we can see that students are somewhat aware of institutional research-activity, but often without knowing the details. The few students who were involved with lecturers' research reported a positive experience, but clearly this was voluntary participation, not involving the whole cohort. From this limited study we can conclude that students, regardless of institution type, are focused on their learning experience and are open to research opportunities where this experience can be maximised. Obviously, research experiences, practical or anecdotal, should only be incorporated if they add value to

the teaching session, and not because there is a requirement to do so. With the current zeitgeist being focused on student employability and moves towards vocational higher education, maybe more consideration should be given to the value of integrating practical and professional skills as part of research-related activity.

Chapter 8

Conclusions and Recommendations

8.1 Introduction

The aim of this thesis was to establish whether the research activities in different institution types impact on the student experience, through addressing four research questions (section 1.4). This chapter discusses the findings in their wider national context and makes recommendations (section 8.4) and suggestions for future research directions (section 8.5).

UK government policy in the last fifty years has highlighted the need to ensure that universities undertake research and teaching. This study was initiated in the autumn of 2011 and in the six years that it has taken to complete this research there have been considerable changes to provision, teaching and research within the sector. Provision is expanding and diversifying with eighteen new institutions being conferred with university status, and a drive to encourage new players into the field through private provision (BIS, 2015). Regarding teaching, 2011 saw the introduction of student number controls to prevent oversubscription (Economics of Higher Education, 2016) which was lifted by 2015, complemented by the freedom for universities to charge over £9000 in fees to allow for a market forces approach (Hillman, 2014). In 2015 the Department for Business, Innovation and Skills' report *Fulfilling our Potential,* stated that teaching is not rewarded as strongly as research, and therefore the

student experience suffers (BIS, 2015). The TEF being introduced (QAA, 2016a) as part of an attempt to redress this perceived imbalance.

Although research may still be seen as the predominant factor it did not escape unchanged. There have been changes to the evaluation of research where more factors are being assessed, adding to the requirements on staff submitting research for evaluation. There has also been a move away from government block grant support, in favour of a marketised approach where universities are reliant on tuition fees (HESA, 2012, 2013). How this funding has affected CBHE is difficult to ascertain due to different funding methods (HEFCE, 2015c).

Changes in policy impact on the working lives of academics, and continued change in their working practices and quality assessment may affect how they view the changing nature of their career and their abilities to meet such changes.

8.2 Institution Type Summaries

8.2.1 CBHE profile

Findings from the CBHE sector (Figure 8.1) show links from institutional marketing to contracted lecturer behaviour where the focus was primarily on teaching. Links between classroom experience and lecturers' research activity are evident, but lecturers reflecting more on the processes of research, Brew's (1999) naïve and expert learner. Although there is evidence of research activity, this tends to be research linked to perusing further qualifications or working with external agencies, where there is relatively little evidence of the *blue skies* research that is traditionally thought of as typifying HE university culture.

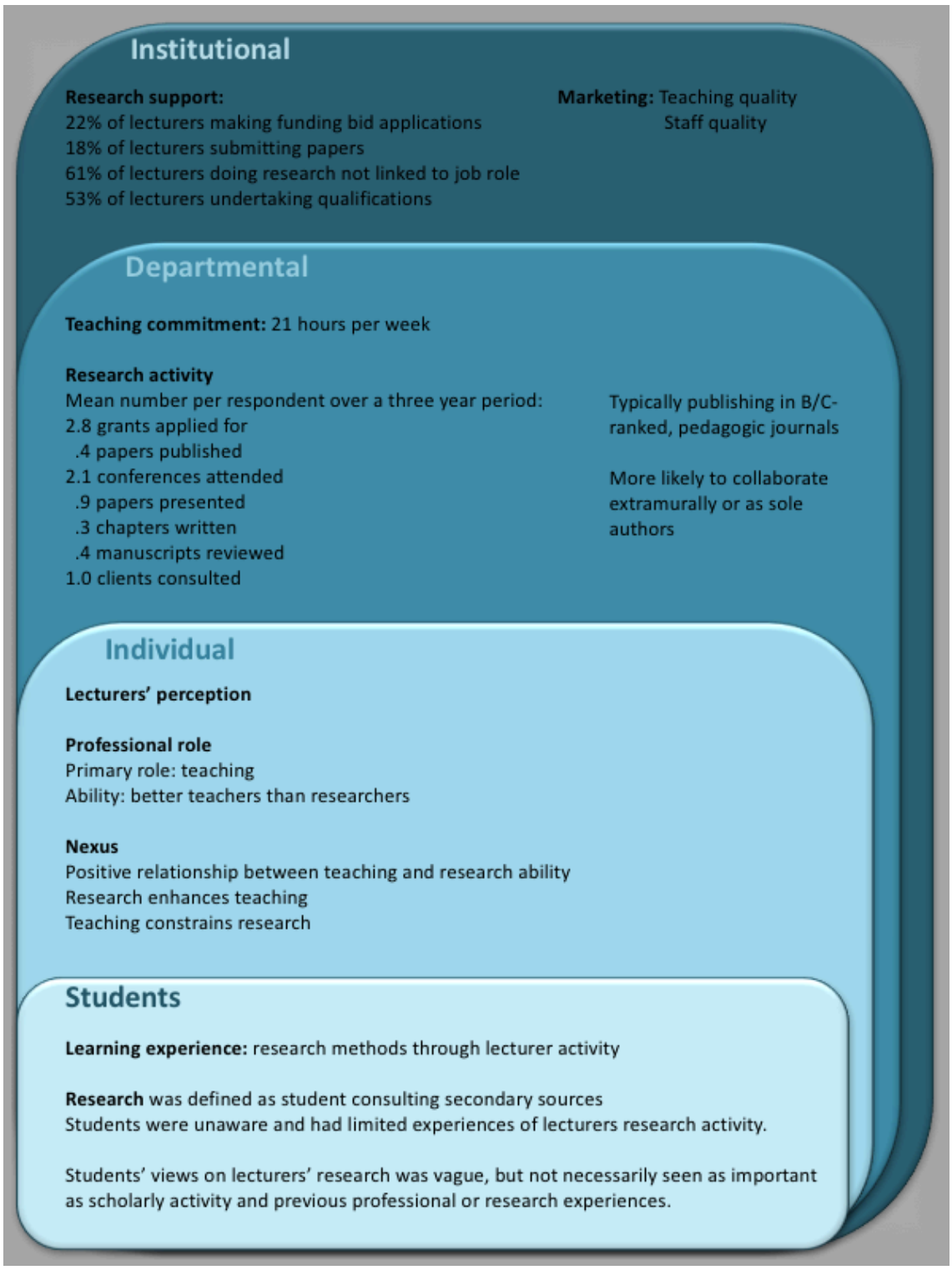

Figure 8.1 CBHE summary of findings

8.2.2 Post-1992 university profile

The post-1992 university data (Figure 8.2) suggests that research is closely linked to teaching, as evidenced through their marketing materials, lecturer perceptions of research activity to support their professional practice, and research publications which are predominantly

pedagogic in their focus. They indicate that primary research is undertaken, including research to enhance the student experience, but there is less research activity taking place in the classroom.

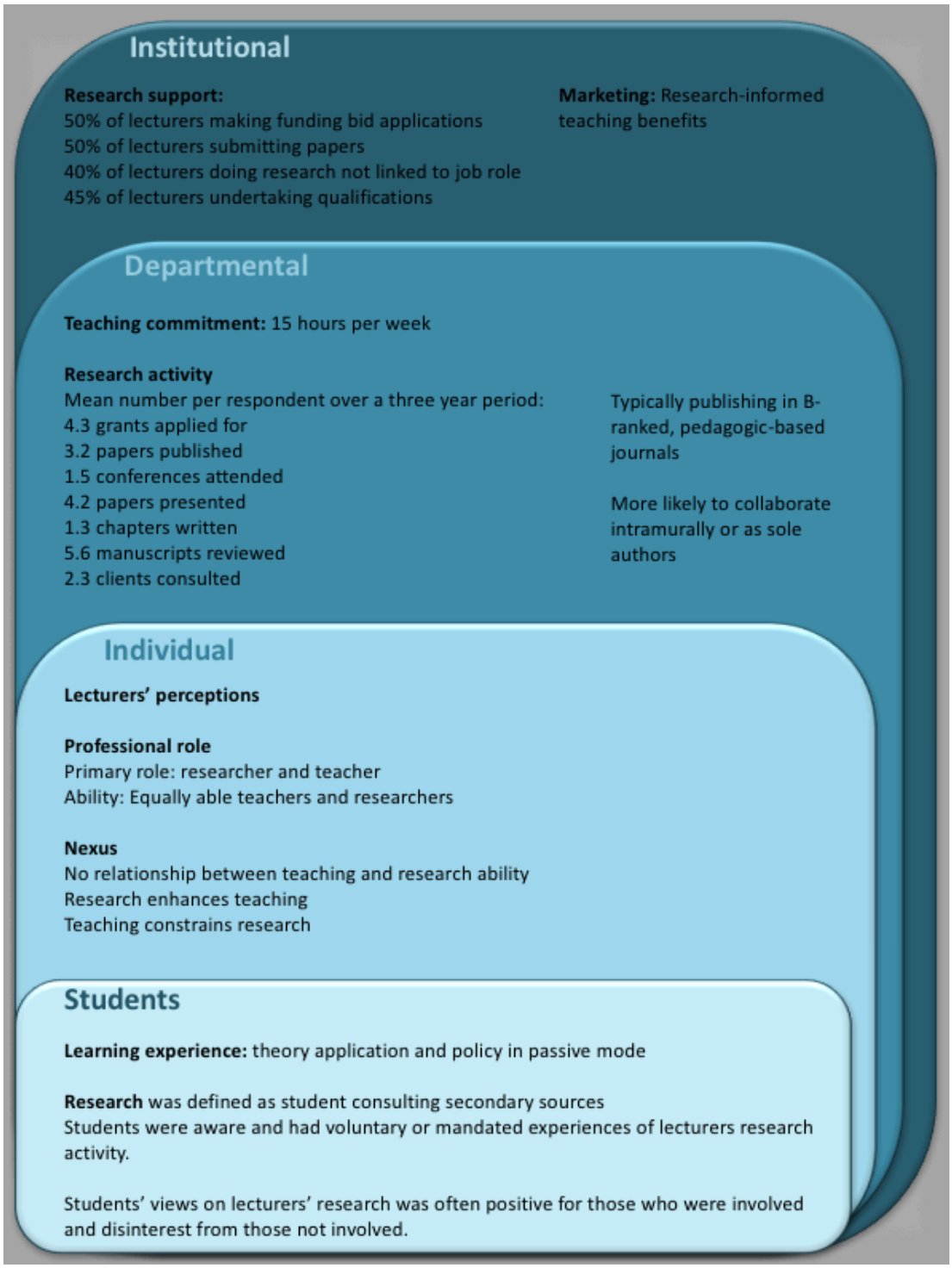

Figure 8.2 Post-1992 university summary of findings

8.2.3 Pre-1992 university profile

Figure 8.3 clarifies the notion that research is vital to the pre-1992 university missions, as evidenced through both marketing and lecturer behaviour. As no student data was captured for this research, due to resistance from university staff to assist in making contact with students, the links between institution, lecturers' perceptions and student experience cannot be made, but is an area for future research.

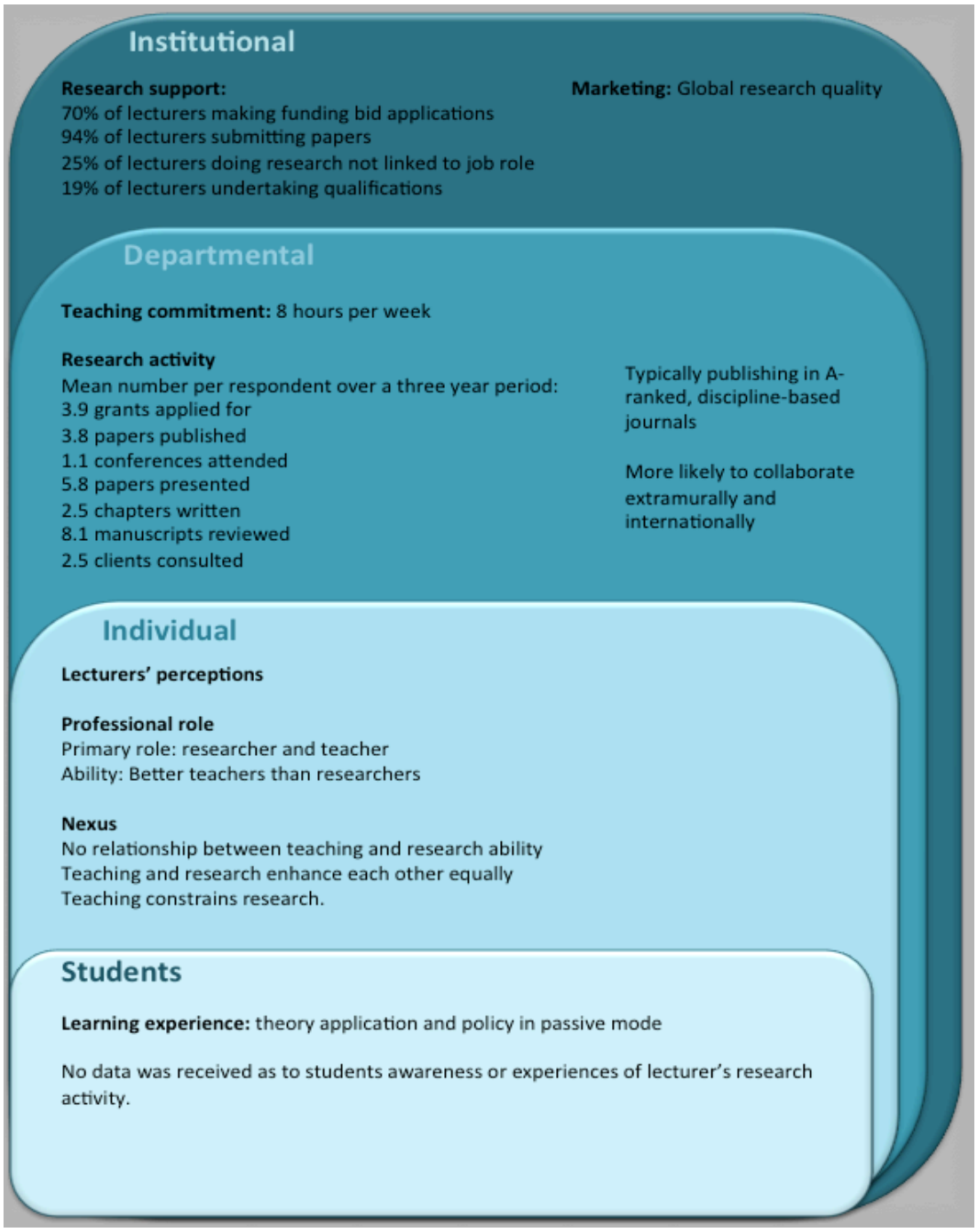

Figure 8.3 Pre-1992 university summary of findings

8.3 Conclusions to Research Questions

8.3.1 RQ1: To what extent do differences exist between the marketing of teaching and research in different types of HE institution?

The different sector approaches to research and teaching is demonstrated through their marketing approaches, and the impact is noted by students and staff (Table 8.1). CBHE marketing employs a quiddity approach, it promotes the student learning experience based on staff expertise (section 4.3), and these expectations are reflected in staff contract types and contact hours (section 5.3). The lack of research claims in CBHE marketing material reflects the limited capacity due to time available to lecturers to undertake research as part of their role.

The post-1992 university marketing also takes a quiddity approach, but with a different emphasis. Where research is referred to in the context of student benefits (section 4.3), their contract of employment specifies contact hours reflecting the balance between teaching and research, leading to some research activity. However not all staff were contracted to undertake research and some were undertaking this outside of their contracted role (section 5.3).

The pre-1992 university marketing materials take a covenant approach by focusing on their institution's research reputation with limited reference to how the students will benefit directly (section 4.3). While for an individual hours for teaching and learning will vary, there is more time available for research, which enables the production of more research outputs (section 5.3).

These findings suggest very clear differences in institutional stances on teaching and research, patterns also reflected in the observed contractual differences, research productivity and reputations.

	CBHE	Post-1992 university	Pre-1992 university
Marketing	Promote the excellence of the learning experience that is delivered by experienced and qualified teaching teams	Promote teaching excellence, highlighting research-informed teaching, with limited reference to research activity	Promote their brand based on global research reputations and the expertise of their staff, with reference to outstanding *teachers* rather than *teaching*
Research contract	22% bring in research funds 18% disseminating 61% non-job related research 53% pursuing further qualifications	50% bring in research funds 50% disseminating 40% non-job related research 45% pursuing further qualifications	70% bring in research funds 94% disseminating 25% non-job related research 19% pursuing further qualifications
Teaching contract	21 teaching hours/week 73% Teaching only 27% Teaching-research	15 teaching hours/week 24% Teaching only 76% Teaching-research	8 teaching hours/week 10% Teaching only 90% Teaching-research

Table 8.1 Institutional differences in stances on research and teaching

8.3.2 RQ2: To what extent do lecturers' individual beliefs and behaviours reflect differences identified at an institutional level?

The institutional stance on teaching and research appears to be reflected in lecturers' beliefs and behaviours (Table 8.2). In line with the marketing material, CBHE lecturers perceived their primary role as that of the teacher (section 5.3). Their research behaviour is greatly constrained by the contract type, reflecting Scarcity Theory, and therefore lecturers interested in research undertake this activity in their own time as it is not considered part of their role. This may explain why so little research from CBHE lecturers is published, although Bell et al. (2017) suggest that CBHE lecturers disseminate in different ways and in different places.

The approach to the teaching-research nexus employed within CBHE tended to be student-focused, where the student is in an active mode, as reflected in the research-based and research-tutored teaching approaches suggested by Healey (2005), and detailed in Trowler and Wareham's (2007) model. This may be the product of Boyer's (1990) scholarship of integration where teaching does not have to be informed by the lecturer's primary research, but from scholarly activity and research of teaching practice (Griffiths, 2004). The lack of CBHE research activity did not reflect a poor student experience as Neumann (1992) predicted, indicating that scholarly activity can advance knowledge for teaching, and there was no evidence that those who are not research active are dull and unexciting.

Post-1992 university lecturers did not differentiate between the teaching and research roles, claiming they were of equal importance (section 5.3). In some cases this may have been reinforced by their preference for HE pedagogic research, strengthening the links between research and teaching, as suggested in their marketing. As the post-1992 university staff reported various levels of research activity and contract types (section 5.3) this suggests that the students benefit from Neumann's (1992) global nexus and Ramsdens and Moses' (1992) integrationist nexus, where departmental research activity is experienced, rather than their direct experience of their lecturers' research activity. How student may benefit from indirect

experiences of research has not been outlined. This poses some interesting questions, such as whether the contract type (research, scholarship or teaching) relates to differentiated teaching abilities, and if so in what way. If it is research-activity that leads to the better teaching, as Neumann (1992) argued, then should those with poorer teaching abilities be given more research responsibilities to improve their teaching practice?

Although the pre-1992 university marketing focuses on their research reputation, the lecturers surveyed for this study indicated that they were better teachers than researchers (Table 5.9). This focus on the teaching factor when research is promoted as such a vital mission within pre-1992 universities gives strong evidence for the adoption of a tangible (Neumann, 1992) and strong integrationist (Ramsden & Moses, 1992) approach. This appears implicitly within their marketing materials, where there is not an explicit reference to how students may benefit, but at an individual lecturer level the focus on discipline-specific research may be seen as key.

	CBHE	Post-1992 university	Pre-1992 university
Nexus	Primary role: teaching Ability: positive TR relationship Better teachers than researchers Teaching constrains research	Primary role: teaching and research Ability: no TR relationship Equally good at both Research enhances teaching	Primary role: teaching and research Ability: no TR relationship Better teachers than researchers Least likely to report that research enhances teaching
Publishing	Pedagogic B/C-ranked Extramural or sole authorship	Pedagogic B-ranked Intramural or sole authorship	Discipline specific A-ranked International collaboration
Supporting model	Scholarship of Integration (Boyer, 1990) Research-informed teaching (Griffiths, 2004) Students as participants (Healey, 2005) Research-active students (trawler & Wareham (2007)	Global nexus (Neumann, 1992) Integrationist nexus (Ramsden & Moses, 1992)	Tangible nexus (Neumann, 1992) Strong integrationist nexus (Ramsden & Moses, 1992)

Table 8.2 Institutional differences in lectures' beliefs and behaviours

8.3.3 RQ3: To what extent does the research undertaken by lecturers in different institution types relate to teaching practice?

The trends that emerged from the limited data suggest activity is highly varied in all sectors (Table 8.3). CBHE lectures included a greater variety of learning activities and interactions in their classrooms, which is in line with the marketing claims, contracts and beliefs. But based on the definition of research-informed teaching applied to this thesis, what was not expected was the amount of CBHE lecture time dedicated to research-informed teaching by comparison to the post-1992 university lectures. There may be several explanations for this. At a practical level, the CBHE class sizes are typically smaller and therefore allow for more interactive styles of learning (Bandiera et al., 2010). When examining research skills and experience, although not typically research-active in the university sense of the phrase, many CBHE lecturers reported undertaking research not connected to their job, and only half of the post-1992 university survey respondents claimed to be undertaking research activities related to their role (section 5.3). We can therefore speculate from this limited data that there are similar amounts of research undertaken in the different institutions, but that this research activity is not contractual or defined in the same way. Further detailed research with staff in all three sectors is needed to draw more definite conclusions.

As this study uses Brew's (2006) interpretation of research-informed teaching, what can be assessed through the observations was whether research was presented to students or whether students were learning through research. What could not be assessed is the degree to which the lecture was informed by research about teaching. Further research examining how teaching practice is informed through teacher training qualifications, ongoing CPD and continued research on classroom practice would give a more complete insight into the sectoral differences in research-informed teaching.

	CBHE	Post-1992 university	Pre-1992 university
Classroom activity	Variety of delivery styles	Passive delivery style	No data
Classroom research content	Majority of delivery was research activity Majority of time spent in lecturer or group activities	Majority of delivery was theory, application or policy Majority of time spent passively	No data

Table 8.3 Institutional differences in classroom acitivity and research-informed teaching

8.3.4 RQ4: To what extent do students at different institution types perceive and experience lecturers' research differently?

Although quite distinct trends have emerged from the first three research questions, results were more homogenous in this exploration of students' experiences (Table 8.4). CBHE students showed a lack of awareness of staff research activity, and in a similar vein not all of the university students were aware of what research activity occurred at their institutions (section 7.3). The experiences students had of research were linked to their experiences of participation. The students who were actively involved in data collection had the most positive view, and those who were required to take part as participants had a less favourable view. It was clear that some students were not interested in the research pursuits of their lecturers, these students indicating that teaching should be the primary focus of lecturers' academic activity.

Student suggested that a lecturers' previous research activity was necessary to for them to learn about research processes, and that lecturers' professional practice supported the discipline-specific aspects of learning. The links here are clearly related to the skills and knowledge that needed to be transferred from the academic to the student. The CBHE students felt that their lecturers' scholarly activity should be of a sufficient level of engagement for their learning to be meaningful. University students highlighted that inclusion of lecturers' research should only occur where relevant.

	CBHE	Post-1992 university	Pre-1992 university
Student awareness	Various levels of awareness but no knowledge of the topics	All groups aware or assume research activity goes on	No data
Student experience	1 x participant 4 x no experience	1 x research assistants 2 x mandatory participation 2 x no experience	No data
Student perception	Lack of current research activity was not seen to have an impact, scholarly activity will suffice Previous professional or research activity was important Research activity does add currency	Previous professional or research activity was important Research used in taught sessions must be relevant	No data
Reputation	Unaware of institutional research activity Reputation: Teaching	Unaware of institutional research activity Reputation: League tables (data collected pre TEF)	No data

Table 8.4 Student awareness and perceptions of research activity

8.4 Discussion and Recommendations

Higher education is continually evolving, with major changes occurring during the research period. Developments that may impact on HE in the near future are the increase in private provider provision; the effect of the increased marketization on traditional provision; the subtle shift in the university workforce to include teaching-only and scholarship contracts; the Teaching Excellence Framework; and Brexit. These shifts provide areas for future research.

8.4.1 Marketing

Possible impact of marketing on student choice

In the service sector it is important that marketing does not end at the point of purchase, but is maintained throughout the lifetime of the service. In the HE sector, initial recruitment marketing is supplemented by students sharing their experiences with potential students through word of mouth or social media. Helgesen (2008) suggests that *relationship marketing* has an overarching impact: that if we experience good products and services we are more likely to return to a provider because we have formed a relationship (Szekeres, 2010). Individuals may avoid searching out other service providers where there has been a joint investment in the relationship, thus developing loyalty to a brand (Ravald & Grönroos, 1996). If this is the case, perceived key element in the branding of HE, the colourful logo and interactive website are less important than the description of the organisation's long term ability to meet the clients' needs and maintain satisfaction, thereby encouraging repeat trade and word of mouth recommendations (Coates, 1998). This suggests that marketing messages transmitted to applicant must accurately represent the student experience, so that student expectations are met. This importance was borne out in the comments of students, who claimed that choices were made through word of mouth recommendations, where proximity to the institution was also an important factor, particularly for CBHE students (Table 7.1). Their geography means they have increased chances of meeting previous and current students from the locale, and framing their expectations of the student experience through these contacts.

Possible implications from Brexit

Brexit adds further complexity to a market in flux. Universities may need to reconsider their marketing if UK HE becomes less attractive, and EU applications are already declining (Adams, 2017). Impact will disproportionately affect the pre-1992 universities as EU students tend to apply for the top-ranking UK universities (British Council, 2014) of whom two thirds are pre-1992 institutions (The Complete University Guide, 2016) with some 125,000 EU student studying in UK universities (Goodfellow, 2016). The considerations around marketing may be of value here. Changing market forces may lead all parts of the sector to rethink their student base and to adopt new strategies to attract new students.

8.4.2 Scholarship

The findings of the study seem to suggest that the activity that most enhances the student experience in all types of institution is in fact scholarship, rather than research. This is quite logical when Boyer's forms of reconsidered scholarship are applied to the learning experience. The scholarship of teaching underpins professional practice, where it is essential to keep abreast of evidence-based practice, especially with emerging technologies. Also vital to the taught lesson and associated resources is the scholarship of integration. Great skill is involved in bringing together relevant information, and synthesising it into a format that is appropriate for the level of student to being taught. With regards to the scholarship of discovery, having experienced the range of research methods linked to the discipline throughout their studies, and keeping updated with developments within the discipline ensures the lecturer has sufficient knowledge and skills to teach research methods without the need to be at the cutting edge of research within the discipline. The scholarship of application is also important, because showing students how their discipline skills and knowledge are used in practice makes the subject relevant and contemporary. Lecturers who can keep these multiple links alive in their teaching can pass on valuable lessons to the students who will be progressing in to the workplace.

Embodying the Humboldtian service of scholarship, where students and lecturers work together, creating scholarship communities, as Brew argues, may meet the needs of the new higher education landscape. Supercomplexity and Mode 2 production of knowledge are making new demands on society so maybe there needs to be a reconceptualisation of how research is viewed and undertaken. Arguably, universities emphasis on research, has possibly been at the expense of the research-engaged learning experience. Scholarship is indeed being reconsidered, as more university lecturers are being employed on teaching-only or scholarship contracts. Although whether this is due to reflection regarding effective teaching and learning, or the product of fiscal considerations is not clear.

The findings here suggest that CBHE staff have been more engaged with Boyer's forms of scholarship, possibly linked to the vocational nature of many of the foundation degrees delivered. The data on student experience demonstrates that by Level 5, psychology students are engaging in scholarship activities, they are research-active. They are learning through doing rather than experiencing more didactic classroom-based lectures on research methods, as was observed in the university data. Learning the skills through activity is essential for deeper learning, and such skills are transferable to the workplace offering a long-term benefit from this approach.

8.4.3 Teaching

Redefining research-informed teaching

The data collected for this study inevitably offers a brief snapshot in time from a few institutions and one discipline, and as such the findings are indicative, they cannot be generalised to the whole sector or other disciplines. This said, the findings add richness to the knowledge base and may act as a trigger for a reconsideration of how we define research-informed teaching. Although literature suggests that it is important for students to be educated in a research-rich culture, embedded in research-active departments and taught by research-active lecturers (Neumann, 1992; Terenzini, 1999), no evidence has thus far been

presented that identifies the active ingredient of teaching-research nexus, or indeed how this is disseminated to the students through research-informed teaching. The data presented does suggest that research-informed teaching is not dependent on the research culture of the institutions or departments, rather it suggests that the lecturers are the instigators of research-informed teaching. Unfortunately, due to the anonymity of the lecturers observed, it is not possible to identify their level of research activity, in either the traditional university sense of the word, or through personal endeavours outside of the work role. Therefore research needs to be undertaken to identify what research contexts and experiences enhance teaching and learning in order to maximise student experience in both HEIs and CBHE contexts.

Consideration also needs to be given to students' learning experiences that are outside of the classroom: *research-informed learning*. Previous arguments that CBHE may lack the learning resources to compete with HEIs have been mainly eroded, since the advent of subscription-based journal databases and eBooks, offering all students equality of access to information through university partnership arrangements. Where these experiences may vary are that universities may offer students opportunities to participate or assist in lecturer-led research projects, whereas CBHE may offer alternative experiences through a more research-active curriculum and active-research projects.

Contractual shift

There is also a move towards decoupling research from teaching within the university sector, where Lucas (2014) and Locke et al. (2016) have indicated the trend towards more staff being employed on scholarship and teaching-only contracts, the longer term implications of such changes are yet unknown. Such a move stands against the views of Neumann (1992) who claimed that it is more important that students are taught by researchers than those who can instruct. The data collected here does not support such a stance, favouring Barnett's (1992) view that it is not necessary to be research-active to teach undergraduates. There is also

evidence that academics are unclear what teaching-scholarship contracts involve in detail, the requirements to undertake research, and the implications for promotion (Locke et al., 2016). There will be added implications for early career academics developing their research skills if there is a scarcity of research contracts (Fazackerley, 2013).

Teaching Excellence Framework

The HE teaching landscape has changed dramatically since the 2015 announcement by the Business, Innovation and Skills Committee that HE teaching would be assessed through the TEF (BIS, 2016b). After several consultations three areas were designated for assessment; *teaching quality*, the *learning environment* and *student outcomes* (BIS, 2016). Most interestingly within the teaching quality assessment is the need for institutions to provide evidence that "the leadership, strategy and ethos promotes and values teaching excellence" (BIS, 2016b, p. 13). This may go some way to creating a more equitable view of the teaching component, rather than teaching contracts being used as a punishment for insufficient research (Fazackerley, 2013).

Considering research-informed teaching the requirement is that "the learning environment is enriched by linkages between teaching and scholarship, research or professional practice" (BIS, 2016b, p. 15), suggesting that scholarly activity and professional practice are as valued as 'pure' research, and relates to each of Boyer's forms of scholarship. This is an interesting move from the previous focus on research, acknowledging that graduates require broader skills than knowledge production and absorption, they need to be able to put theory into action. This thesis has made some inroads into understanding how research is experienced in the classroom, and in a limited way contributes to exploring these TEF concepts. How HEIs respond to the results of the first TEF (Figure 8.4) will be the subject of future research.

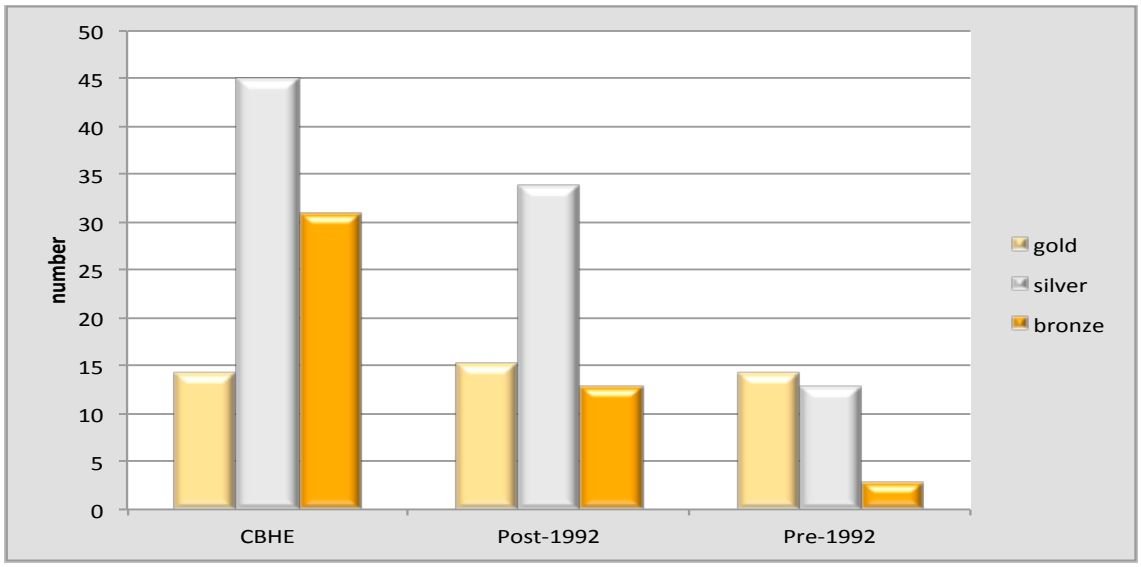

Figure 8.4 Institutional comparison of TEF results

Many nexus models, and this research, suggest it is the research-active lecturer that inspires, enhancing the student experience (see Figure 2.1 for overview). This argues for greater clarity in the understanding of research in the classroom context, and transparency for students and teachers. There may need to be more explicit definitions of roles and of the balance between teaching and research in staff contracts. A research project to explore in-depth the links between classroom experience, learning opportunities and the place of different styles of research is therefore advocated.

University considerations

With increased student fees, marketisation of the sector, and the impact of the TEF, more attention could be paid to the promotion of teaching within the sector. To some degree this change may already be underway. If the university shift to teaching-only and teaching-scholarship contracts continues it will be interesting to see how those in the university sector squares these changes. Having argued for decades that it is essential for academics to be research-active, what explanation can HE institutions offer for such a sea change in their stance? In all probability it is economic factors that are driving the situation, but this may not sit well with many.

The longer-term prospects may see a change in the teaching landscape. The more staff employed on teaching-only contracts and the implementation of the TEF may lead to the development of the *professional higher education teacher* whose status is equitable to that of the researcher. This could be a win-win situation for students and staff alike. It may allow staff to focus on their preferred route, and students to reap the benefit of dedicated teaching staff, undistracted by pressures related to the REF. The findings of this thesis suggest that this is entirely acceptable as scholarly activity, rather than traditional research activity, may be a predictor of higher levels of research-informed teaching.

8.4.4 Research

The role of research activity in research-informed teaching

To become a HE lecturer the same initial qualification a first degree is required, HEIs generally require PhD qualifications in a relevant discipline, whereas CBHE requires formal teaching qualifications. What differs thereafter is the culture, where the differences emerge in teaching style and how non-teaching time is spent. HEIs tending to lecture-style delivery with non-teaching time spent researching for publication, whereas CBHE tend to small interactive teaching groups with the limited time spent in research. What impact might such cultural differences have on the learning experience?

The most important factor claimed by the students interviewed for this study was their educational experience, and not the research activities undertaken by their lecturers. Such activities were seen in a positive light if the students believed that their lecturers' research activity had contributed positively to their educational experience. What this may suggest is that it is not the students' experiences of their lecturers' research activity that is important, but the students' experience of *research*, which enhances the learning experience (Healey et al., 2010). This begs the question, what type of research activity is necessary to offer an effective higher education experience?

The students' valuing teaching and learning over research-activity of staff was highlighted in HEPI's Student Academic Experience Survey (Buckley et al., 2015), which found that students were more concerned that their lecturers had relevant industrial or professional experience or a teaching qualification, than whether they were research-active in their field. Ironically the focus on the teacher training was deemed more important by those from the Russell and 1994 Group respondents.

Scholarship may be an alternative to research activity which is not included within the teaching-research nexus. It is not necessary to conduct research in order to be well read on a subject, and although Marsh and Hattie (2002) suggest that researchers are more likely to be up to date due to their use of current journals, this presupposes that teaching-only lecturers rely on out-dated textbooks. How true this now remains, with instant access to vast databases of current, peer-reviewed journals, would need to be established through more detailed study of lecturers' resources. Equally, an effective teacher may not need to draw on personal research experiences to enthuse and inform. It may be that years of experience as a qualified teacher could have the same effect.

CBHE institutional considerations

CBHE lecturers already appear to be research-active in a range of different ways, although this may not be recognised by management as it is not part of their role. For those who wish to be more research-active, it would be too expensive to provide remission from teaching, the current economic climate would limit the ability to invest in non-teaching hours. But when the working lives of staff at colleges and universities are compared, the time that university staff are undertaking research is part funded by their receipt of research funding from outside agencies. Technically there is nothing preventing CBHE lecturers from bidding for funding, enabling them to be bought out of teaching hours. Lecturers would have the opportunity to undertake research, but not to the financial detriment of the institution. In addition, any dissemination would potentially enhance the reputation of the institution and the individual.

If the problem is so easily solved then why is this not already in operation? The answer is partly that lecturers working in institutions that are not research-active are unaware of the processes to secure funding, and lack the confidence to try (Schofield & McKenzie, 2015). With encouragement from college management, and advice, guidance and collaboration opportunities from those grounded in a research culture, such as partner HEIs, meaningful CPD opportunities could help to develop a research culture within CBHE provision. This could offer research opportunities to those who are interested in pursuing this avenue, allowing those who want to focus on teaching the ability to do so without pressure to research.

Institutional or Departmental considerations

In considering ways to enhance students' experience, awareness and appreciation of research, a number of outcomes and comments from staff and students in this research prompt some further action. The profile of research-active staff may be emphasised through the display of posters and papers which generate discussion of research outside of the taught experience (Zetter, 2002). Such conversations and the possible inclusion of students in the research process may help to mitigate students' complaints, for example of staff absences (Jenkins & Zetter, 2003).

Universities can take the lead by ensuring that their Teaching and Learning Strategy represents the requirements of their Research Strategy ensuring that both are working to enhance the curriculum through increased student research-based activity and more emphasis on pedagogic research (Zetter, 2002). They could incorporate more effective workload planning and sabbaticals within their Staff Development Policies and Procedures to nurture these links (Zetter, 2002).

Departmental managers could consider how to maximise staff deployment based on those who have the skills and the interest to take such strategies forward. Recruitment processes, leadership job descriptions and workload planning could be used to ensure that those most committed to research-informed teaching have the opportunities to maximise

their passion (Jenkins & Zetter, 2003). If a whole team approach is encouraged, research cluster groups can be created where staff can share ideas on how research may be integrated within their, or associated, disciplines (Jenkins & Zetter, 2003; Zetter, 2002).

Where management takes a pro-active view of enhancing research-informed teaching, it may also help allay the fear of risk experienced by lecturers when considering introducing novel approaches to the classroom experience. Gresty et al. (2013) proposed a framework of constructed risk categories based on the research-informed teaching literature. *External risk* may be removed if it is the hierarchy who are driving a research-informed teaching policy. *Internal risks*, where the lecturer may be concerned that their teaching practice may suffer if alternative approaches are applied, may be dealt with through staff development and mentoring. *Learning risks*, where the students may not cope with such a change in delivery due to lack of skills or interest, may be dealt with by taking a whole-course approach, offering an integrated, research-informed learning package.

There should also be consideration of the programme of study as a whole, rather than relying on the lecturers with an interest in the nexus incorporating it into their modules piecemeal (Brew, 2010). Programmes could be audited (Zetter, 2002) and lead be taken by course managers. They could introduce discipline-specific research methodology, and direct module leaders to include inquiry-based learning and small research-based assessments from the outset (Baldwin, 2005), rather than the final year project being their initial engagement with research processes (Healey & Jenkins, 2006). Alternative ways of contextualising research during the earlier years of the undergraduate experience are to use new research by comparison to historical accounts to show the uncertainty in knowledge production, where today's cutting-edge research may eventually be displaced (Baldwin, 2005). Courses may also find opportunities to infuse the taught experience with the values of research though the introduction of concepts such as openness to new findings, objectivity, respect, persistence, rigour and creativity (Baldwin, 2005).

Others, such as Brew (2012), argue for a complete reconceptualization of HE where there is a removal of the traditional hierarchical structures in favour of academic communities of practice. Here *critical action* will allow for an interconnected approach to problem solving; stepping outside of the departmental or purely academic boundaries, and working collaboratively at various levels. This approach would incorporate the researchers of tomorrow dealing with the supercomplexity of today (Brew, 2010) by the integration of research and teaching, where such an integrated approach to the curriculum would afford students the opportunities to become apprentice researchers. Opportunities should be offered to students to become immersed in the research-culture of the department, such as inviting them to seminars and creating special interest groups (Baldwin, 2005). By an earlier introduction into the world of research students may immerse themselves in personal growth, before becoming distracted by the outcomes-based approaches that institutions are funded for (Brew, 2002).

Student benefits

These changes may affect the student experience in several ways. Firstly there may be a move from research-informed to research-enhanced teaching, where the integration of research into the learning experience is relevant, as it has been designed into the taught session. Secondly, by reflecting on the student experiences and attitudes to research, the experiences need to be research *activity* for maximum engagement, and not mandatory participation as a course requirement. It is also important to note that students enter HE with different needs and expectations, and research is not perceived to be important for all. Indeed, for many students it is the quality of the learning experience. Enhancing teaching whilst also allowing research opportunities to those students who are interested may better cover the needs of the student body. It will offer a focused learning experience for those who are not interested in research, yet allow those who are interested the opportunities to engage with it in a meaningful way, possibly inspiring the academics of tomorrow.

8.5 Summary of Future Research Directions

Based on the research findings, and being cognizant of the current political and economic climate in the English HE sector, there are several important areas for future research.

RQ1. To what extent do differences exist between the marketing of teaching and research in different types of HE institution?

Research could explore the impact of marketing to a target student demographic, bearing in mind their educational needs and expectations. It may take some time to establish whether different strategies are being employed effectively, as the outcomes of the TEF was too late for the 2017 academic year applications. The impact on student application numbers will not be evident until 2018.

RQ2. To what extent do lecturers' individual beliefs and behaviours reflect differences identified at an institutional level?

A more detailed examination could be made of the research and scholarly activity of academics in all types of institution. This exploration should include higher qualification requirements and expectations for CPD, and the place of research outside of the explicit expectations of an academic's job specification. Inclusion of their rationale for undertaking such additional activities should be made. With the contractual shift becoming more evident in the post-1992 university lecturer survey results, it may be interesting to explore the motivation of those undertaking research that is not related to their job.

RQ3. To what extent does the research undertaken by lecturers in different institution types relate to teaching practice?

The key here is to identify the active ingredient of research-informed teaching, and review how the findings can best be disseminated within the profession. As has been evident from the review of the literature there is no clear identification as to what facet

of being research-active relates to the classroom experience. Examination of this should be made in order to ensure that the best learning experience can be offered to students. If it becomes evident that it is not the traditional didactic dissemination of research that enhances learning, then HEIs may need to rethink its role to ensure that excellence in both teaching and research can be achieved.

RQ4. To what extent do students at different institution types perceive and experience lecturers' research differently?

As students are motivated to undertake HE for various reasons it is unrealistic to assume that they will all be interested in undertaking primary research. Therefore it may be beneficial to explore offering research experiences to those who are interested in engaging in greater depth, rather than adopting a one size fits all approach, leading to the implementation of research-informed learning opportunities for those students interested in research.

The unique contribution of this thesis is to have considered the teaching-research nexus in the context of CBHE. The results provide a broad perspective which is interesting in its own right, and a valuable baseline for research in more depth into each of the areas considered. It presented an opportunity to research at the macro scale, by considering how CBHE institutions present themselves through the marketing materials, and at a micro classroom scale has enabled us to develop the methodology to track the students experience of learning in the classroom. While it can be argued that the thesis might have pursued just one of these topics in much greater depth, the opportunity to take a more holistic look at higher education provision in CBHE has been valuable.

Chapter 9

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Chapter 10

Appendices

Appendix 3.1 CBHE Marketing summary table

Teaching quality		
Documented quality	A9	Quality Assurance Agency (QAA) for Higher Education commended us for our work
	C15	full confidence for its HE provision from the Quality Assurance Agency for Higher Education
	C17	received Outstanding Status from Ofsted
	D21	rated highly by the Higher Education Quality Assurance Agency
	G11	highly rated by independent inspectors
	H6	we received an outstanding 'inspection' report by the Quality Assurance Agency for Higher Education
	B7	The College's last Integrated Quality and Enhancement Review (IQER) resulted in a judgement that "confidence can be placed in the academic standards and quality of learning opportunity that the College provides."
	C15	have received Outstanding Status from Ofsted
	C18	recognised by the Quality Assurance Agency for Higher Education as having many areas of good practice
	D20	rated highly by the Higher Education Quality assurance agency
	G12	are highly rated by independent inspectors
	C15	received Outstanding Status by Ofsted
	C18	recognised by the Quality Assurance Agency for Higher Education as having many areas of good practice
	D20	highly by the Higher Education Quality Assurance Agency
Claimed quality	C14	All delivered to the highest standards
	D18	provide high-quality teaching
	F11	excellent teaching
	F19	provide the right teaching
	H1	a highly successful reputation
	I1	proud of the quality of teaching
	C13	delivered to the highest standards
	D17	provide high-quality teaching
	E15	delivering excellence
	F12	excellent teaching
	F19	provide the right teaching
	H7	ensure delivery is of the highest quality
	C13	all delivered to the highest standards
	D17	provide high-quality teaching
	E15	delivering excellence
	F9	excellent teaching
	H1	up an excellent reputation for the delivery of Higher Education
	H7	ensure delivery is of the highest quality
	E14	teach our learners to the best of our ability
	F15	provide the right teaching

Staff quality		
Teaching ability	A16	our expert tutors
	B6	our highly qualified and experienced team of staff
	D17	experienced lecturers and tutors
	F4	highly experienced lecturers
	G15	Our specialist teaching staff are highly experienced in their field
	H4	highly enthusiastic lecturers who are specialists in their disciplines
	I4	delivered by teams of highly qualified lecturing staff
	A18	delivered by a team of highly qualified and professional tutors
	D16	experienced lecturers and tutors
	E14	teach our learners to the best of our ability
	F10	highly experienced lecturers
	G16	specialist teaching staff are highly experienced in their field
	A17	They are delivered by a team of highly qualified and professional tutors
	D16	The college's experienced lecturers and tutors
	F7	our highly experienced lecturers
Accessibility	B7	support you in every aspect of your studies
	D17	close tutorial support
	G17	you receive more attention and support
	A21	students can expect more contact time with tutors and lots of individual support
	B17	high level of personal support
	D16	close tutorial support
	G18	you get more attention and support
	A20	students can expect more contact time with tutors and lots of individual support
	B21	tutors to provide you with a high level of personal support
	D16	close tutorial support
Staff expertise		
Research ability		

Student benefit from research activity		
Research activity	A16	many of whom are engaged in scholarly research… This further enhances the curriculum
Research informed teaching		

Research quality		
Documented quality		
Claimed quality		

Appendix 3.2 Post-1992 marketing summary table

Teaching quality		
Documented quality	C3	It recognised the long- standing impact of our … teaching and training
	E1	our latest inspection by the independent Quality Assurance Agency for Higher Education (QAA) praised the "close and sustained partnership" between staff and students
	H23	received the highest level of commendation for our academic standards and quality
Claimed quality	C7	strive for excellence in our teaching
	E2	through innovative teaching and learning
	H5	underpinned by inspirational teaching
	A18	founded on high quality teaching
	C5	We have an excellent reputation for our teaching
	E14	Our teaching excellence
	E25	our award-winning Student Academic Partners scheme teams up staff and students to find ways to make our teaching even better
	H4	underpinned by inspirational teaching
	C5	excellent reputation for our teaching and learning
	H23	renowned for the quality of our teaching

Staff quality		
Teaching ability	E17	our award- winning Student Academic Partners scheme teams up staff and students to find ways to make our teaching even better
Accessibility	H21	our staff will support
Staff expertise	A11	some of the best academics in their field;
	F7	led by dedicated academics who are leaders in their field
	A11	some of the best academics in their field
	C15	learn form experts about your subject
	C15	learn form experts about your subject
Research ability		

Student benefit from research activity		
Research activity	A12	they enjoy what they do and they pursue their own research and learning with a passion and enthusiasm that permeates the whole University
	E2	cutting-edge research
	E16	give real depth to your course
	A12	they enjoy what they do and they pursue their own research and learning with a passion and enthusiasm that permeates the whole University.
	A18	founded on high quality teaching, ground-breaking research
	E23	ensures the latest insights are incorporated into our teaching
Research informed teaching	A1	Scholarship, research and learning is at the very heart of everything we do
	H10	our research-engaged teaching help you to maximise your potential
	A1	Scholarship, research and learning is at the very heart of everything we do
	H11	research-engaged teaching help you to maximise your potential
	H25	including developing your own research skills

Research quality		
Documented quality	E15	as well as research judged as 'world-leading' in some areas in the last Research Assessment Exercise
	E22	Our world-leading research – judged as 'world class' and in some areas 'world leading' in the most recent Research Assessment Exercise audit
Claimed quality	C3	It recognised the long- standing impact of our research
	C7	strive for excellence in our … research
	F6	underpinned by world leading research
	C5	excellent reputation for … our world-class research
	C5	excellent reputation for … our world-class research

Appendix 3.3 Pre-1992 marketing summary table

Teaching quality		
Documented quality	D6	We are forth in the UK for teaching in the National Student Survey 2011
Claimed quality	D13	we aim to make our teaching inspirational
	I25	outstanding student experience encompasses quality teaching

Staff quality		
Teaching ability	J17	taught by outstanding university teachers
	J1	outstanding university teachers
	I33	outstanding departmental teaching teams
Accessibility	J15	high quality academic student support
Staff expertise	B3	our staff are at the cutting-edge of their disciplines
	G2	our expertise
	B3	our staff are at the cutting-edge of their disciplines
	J15	attracting leading and rising academic stars from across the world
	B3	our staff are at the cutting-edge of their disciplines
	J12	attracting leading and rising academic stars from across the world
Research ability	J17	many of whom are also researchers at the forefront of their fields
	J2	who are also researchers at the forefront of their fields

Student benefit from research activity		
Research activity	B4	keeping students up-to-date with the excitement and knowledge of all the latest developments
	J3	Your academic career will be enriched by world-leading research
	B4	keeping students up-to-date with the excitement and knowledge of all the latest developments
	J1	enriched by world leading research
Research informed teaching	G12	Our research directly informs your education
	G9	We teach you differently by helping you explore a range of global challenges, from climate change to hi-tech crime, based on our world-leading research

Research quality		
Documented quality	D5	We are a member of the prestigious Russell Group of research intensive universities
	G11	a founding member of the Russell Group of research-intensive UK universities
	J15	The reputation of a great university depends …on the quality of research. In the past year alone our computer scientists and medical experts have been pioneering the use of computer game technology to alleviate patients' pain and discomfort through distraction therapy
	J15	The reputation of a great university depends …on the quality of research …we are leading on the ATLAS Project at the Large Hadron Collider
	J15	The reputation of a great university depends …on the quality of research… we have even shed light on the 'beginning of time' by discovering the world's oldest known calendar!
	I11	Two of the University's research breakthroughs – the development of liquid crystal technology– made it into a recent list of '100 discoveries in UK universities that changed the world' ('*Eureka UK*' published by Universities UK)
	I11	Two of the University's research breakthroughs –a bone density scanner – made it into a recent list of '100 discoveries in UK universities that changed the world' ('*Eureka UK*' published by Universities UK)
	G2	We are one of the UK's leading research universities and ranked among the top 75 in the world
	G4	We are one of the founding members of the prestigious Russell Group of research-intensive UK universities
	D5	90 per cent of our research is internationally recognised (RAE 2008)
	G3	A member of the prestigious Russell Group of research-intensive
Claimed quality	C5	excellent reputation for … our world-class research
	B6	international and vibrant research-led academic environment
	J46	the impact that our … research make around the world
	I10	World class research inspired in Hull
	B6	international and vibrant research-led academic environment
	J37	the impact that our .. research make around the world
	B6	international and vibrant research-led academic environment
	J29	academic reputation for innovative research
	G5	we are one of the leading research universities in the UK

Appendix 3.4 Teaching and Research Survey

SECTION A

Gender: M / F Age: _____

Job title: _____ Years in post: _____ Full/part time

Teaching

On average how many hours do you spend carrying out each of these activities in a **week:**

Teaching activity	**Further education**	**Higher education**
Lectures/seminars/tutorials		
Workshop/practical		
Supervision		

How many weeks per year are timetabled? _____

On average how many hours **per week** do you spend:

Activity	**Further education**	**Higher education**
Preparing for teaching		
Marking		

Research

When considering your research activity over the **last three years** please indicate the approximate number of:

research grants applied for	
research grants you have received	
papers you have presented at conference	
posters you have presented at conference	
conferences attended, but not presented at	
manuscripts you have reviewed	
journals you have edited for	
what journal that you have published in has the highest *impact factor* – if unknown please write the name of the journal below	

Writing

When considering your writing activity over the **last three years** please indicate the number of:

	As sole author	As co-author
chapters written or being drafted		
books written or being drafted		
books edited or in the process of compiling		
manuscripts you have sent for publication		
articles published or in press		
articles that have cited your work		

Consultancy

When considering your consultancy activity over the **last three years:**

Number of clients (individuals or organisations)	
Number of meetings	Per week/month/year
Documents authored as a result of consultancy	

SECTION B

Please indicate your feelings regarding the **teaching** element of your job:

		Below average				Above average
1.	Compared with others in your discipline, how would rate your ability as a teacher	☐	☐	☐	☐	☐
		Strongly Disagree				Strongly Agree
2.	Teaching undergraduate students is an activity that gives me a great deal of satisfaction	☐	☐	☐	☐	☐
3.	My personal goal primarily is to be a good teacher	☐	☐	☐	☐	☐
4.	Perceived university goal is primarily to be a good teacher	☐	☐	☐	☐	☐
5.	Having more public recognition of quality teaching would inspire me to become a better teacher	☐	☐	☐	☐	☐
6.	Having a salary increase related to my teaching performance would inspire me to become a better teacher	☐	☐	☐	☐	☐

If you **do not conduct research as part of your job** please go to SECTION C on page 4.

If you also conduct **research as part of your job** please complete the following:

		Below average				Above average
1.	Compared with others in your discipline, how would rate your ability as a researcher?	☐	☐	☐	☐	☐
		Strongly Disagree				Strongly Agree
2.	Being involved in research gives me a great deal of satisfaction	☐	☐	☐	☐	☐
3.	Conducting research is an activity that gives me a great deal of satisfaction	☐	☐	☐	☐	☐
4.	My personal goal primarily is to engage in research	☐	☐	☐	☐	☐
5.	Perceived university goal is primarily to engage in research	☐	☐	☐	☐	☐
6.	Having more public recognition of quality research would inspire me to become a better researcher	☐	☐	☐	☐	☐
7.	Having a salary increase related to my research performance would inspire me to become a better researcher	☐	☐	☐	☐	☐

Research and teaching

		Strongly Disagree				Strongly Agree
1.	Research interferes with my teaching capabilities and productivity	☐	☐	☐	☐	☐
2.	Time is a major constraint to improving my teaching productivity	☐	☐	☐	☐	☐
3.	Time and commitment to research interferes with my teaching capabilities	☐	☐	☐	☐	☐
4.	Teaching interferes with my research capabilities and productivity	☐	☐	☐	☐	☐
5.	Time is a major constraint to improving my research productivity	☐	☐	☐	☐	☐
6.	Time and commitment to teaching interferes with my research capabilities	☐	☐	☐	☐	☐
7.	Becoming a good teacher enhances an academic's research	☐	☐	☐	☐	☐
8.	Having to teach something helps me clarify my ideas in my research work on it	☐	☐	☐	☐	☐
9.	I feel I have something to learn from my undergraduate students in my subject area	☐	☐	☐	☐	☐
10.	My research is enhanced by my undergraduate teaching	☐	☐	☐	☐	☐
11.	Students' questions can help me elucidate issues in my research	☐	☐	☐	☐	☐
12.	Conducting good research enhances an academic's teaching	☐	☐	☐	☐	☐
13.	Having to research something helps me clarify my ideas in my teaching of similar topics	☐	☐	☐	☐	☐
14.	I share ideas from my research with my undergraduate classes	☐	☐	☐	☐	☐
15.	I use the results of my research to amend my subsequent teaching of a topic	☐	☐	☐	☐	☐

SECTION C

Do you undertake research which is not part of your job? ☐ Yes ☐ No

Are you currently undertaking a further qualification? ☐ Yes ☐ No

Is there a research component (Project or Dissertation) included in this qualification? ☐ Yes ☐ No

Please add any comments regarding any issues you had completing this survey or any comments on its structure or content – many thanks, Cathy

Appendix 3.5 Matrix definitions and examples (TAP)

Definitions and examples of student activity with respect to theory, application or policy

Codes	Definitions	Examples
Group interaction G-TAP	A **group task** set where students are to interact together with a focus on **policy or theoretical material or its applications**.	• seminars where the focus is theoretical, application or policy • small group task to construct a model • small group task to apply a model • small group task to devise a policy
Lecturer interaction L-TAP	**Discussion** between student and lecturer, be it a singular question aimed at students where interaction between the students is not encouraged, or a lengthy discussion between the lecturer and student, where the focus is on **theory, application or policy**.	• lecturer addresses a question to the class regarding theory, application or policy • lecturer asks a specific student a question regarding theory, application or policy • one-to-one tutorial on regarding theory, application or policy • project/dissertation supervision where the topic is the underpinning theory, application or policy
Independent action I-TAP	A task set to students to be conducted **independently** within class time, that requires no interaction with lecturer or classmates, with a focus on **theory, application or policy**.	• reading a text on theory, application or policy • critiquing a theory, application or policy • applying a theory or policy
Passivity P-TAP	Passive receipt of material that was focused on explaining or **applying theories or policy**. **No interaction** is encouraged by the lecturer.	• lecture on theory, application or policy • video on theory, application or policy • seminar on theory, application or policy

Appendix 3.6 Matrix definitions and examples (SR)

Definitions and examples of student activity with respect to supporting research

Codes	Definitions	Examples
Group interaction G-SR	A **group task** set where students are to interact together with a focus on **research evidence to support** a theory, application or policy.	• seminars where the focus is on the evidence used to support theory, application or policy • small group task to consider supporting research evidence • small group task to find supporting research evidence
Lecturer interaction L-SR	Discussion between student and lecturer, be it a singular question aimed at students where interaction between the students is not encouraged, or a lengthy discussion between the lecturer and student, where the focus is on **research evidence to support** theory, application or policy.	• lecturer addresses a question to the class regarding evidence to support theory, application or policy • lecturer asks a specific student a question regarding evidence to support theory, application or policy • one-to-one tutorial on evidence to support theory, application or policy • project/dissertation supervision where the topic is the evidence used to support theory, application or policy
Independent action I-SR	A task set to students to be conducted **independently** within class time that requires them to consider **research evidence that supports** theory or application.	• reading a journal article • search for supporting evidence
Passivity P-SR	Passive delivery of **research evidence to support** points being made. No interaction is encouraged by the lecturer for a period of at least five minutes.	• lecturer describing or evaluating the methods used in developing the theories, application or policy • lecturer explaining how findings support the theories, application or policy • video demonstrating how theory, application or policy was supported by research evidence

Appendix 3.7 Matrix definitions and examples (RM)

Definitions and examples of student activity with respect to research methods

Codes	Definitions	Examples
Group interaction G-RM	A **group task** set where students are to interact together with a focus on the **methods of research**, from effective sourcing of literature, question formulation, research design, data collection, data analysis and interpretation and how to present findings.	This may include research methods classes, project work and dissertation workshops; or through substantive classes that require students to deal interactively with the methodological elements of the topic • seminars on methods used • group construction of method design • group data collection • group data analysis • group presentation of data
Lecturer interaction L-RM	**Discussion** between student and lecturer, be it a singular question aimed at students where interaction between the students is not encouraged, or a lengthy discussion between the lecturer and student, where the focus is on the **research methods**.	• lecturer addresses a question to the class regarding research methods or data analysis • lecturer asks a specific student a question regarding research methods or data analysis • one-to-one tutorial on research methods or data analysis • project/dissertation supervision where the topic is their research methods or data analysis
Independent action I-RM	A task set to students to be conducted **independently** within class time that requires them to undertake a **research-based activity**.	• design a study or an element of a study • collect data • analyse data • write up an element of research design or analysis
Passivity P-RM	**Passive** receipt of material that focuses on the **methods of research**, from effective.	• lecture explaining research methods or data analysis and presentation • topic module lecture with focus on the methods used within that area of the discipline • practical demonstration of sourcing of literature, research design, data collection, data analysis and interpretation or how to present findings • video demonstrating research methods, data collection techniques or data analysis

Appendix 3.8 Focus group schedule

1. Please can you take a minute to think about how you would define the word research. Now individually can you explain what your definition is, remembering there are no right or wrong answers.

   for the purposes of this interview when we refer to research it will be defined as:
   the process of collecting data in order to answer a research question

2. Please can you take a minute to think about how you would define the word research. Now individually can you explain what your definition is, remembering there are no right or wrong answers.

3. Are you **aware** of any research being conducted at the university/college?
   - Posters
   - Word of mouth
   - website

   With respect to **your lecturers** is this research activity:

   - part of a qualification (MSc/PhD)
   - for funded research
   - Have they had work published

   Are you aware of whether any of your lecturers are undertaking further qualifications? How many of your lecturers are you aware of that are research active?

4. Have you **experienced** research being conducted by any of your lecturers at the university/college?

   Was this through:

   - Being a participant in the study
   - Helping with data collection/piloting
   - Staff discussing their research
   - A lecture about their research
   - Reading one of their publications
   - Attending a seminar or conference

5. What **impact**, if any, has the experience of their research activity had on you?
   - Increased understanding
   - Developed research skills
   - Expanded methodological understanding
   - Stimulated interest
   - Motivated you to pursue research
   - Staff have been unavailable
   - Staff seem less interested in supporting your teaching
   - Unable to understand the level at which they deliver
   - Their research distorts what they teach

All bullet points are prompts to the questions

Appendix 3.9 Application for Faculty Ethical Approval

University of Plymouth
Faculty of Education

Application No:
(for FREC use)

Appendix 1

APPLICATION FOR FACULTY ETHICAL APPROVAL
Part A: Ethics Cover Sheet
Part B: Ethical Review Statement
Part C Ethics Protocol Proforma

This form consists of three sections. Parts A and B must be completed in ALL cases. Depending upon the method of data collection / analysis, Part C may also be required (see page two of the Ethics Review Statement).

All documentation should be submitted **electronically** to Claire Butcher, Administrative Assistant (Research), tel: 85337, claire.butcher@plymouth.ac.uk. At the same time, a hard copy of this application form, signed by all relevant parties, should also be submitted to Claire Butcher.

Part A: ETHICS COVER SHEET

1	Principal Investigator: Cathy Schofield
2	Other members of project team: PhD Supersivors: Professor Pauline Kneale, Dr Karen Gresty, Dr Debby Cotton, Dr Jennie Winter
3	Project Title: An investiagion in to the role of scholarly activity in institutions delivering higher education courses and the impact this may have on the curriculum and student perceptions.
4	Repeat Submission? No: ☒ Yes: ☐ Version Number: 1
5	Proposed project start date: June 2012
6	Summary of aims, objectives and methods (max 250 words) The aims of the research are to establish what range of scholarly activity is conducted by staff at a range of institutions delivering HE, the degree to which students are aware of and involved in any research and what learning experiences students have with respect to the teaching-research nexus. Lecturers delivering level 5 modules on social science courses will be asked to complete two questionnaires. The first questionnaire will identify the range and quantity of scholarly activity of lecturers and the second will measure the teaching-research nexus from their perspective using the 'Teaching and Research Survey' developed by Marsh and Hattie (2002). In order to examine the student learning experience with respect to the teaching-research nexus, level 5 students studying on social science courses at selected institutions will be asked to complete a Student Learning Experience Diary for a week (attached). In order to identify what awareness and experiences students' have regarding the research activity of their

	lecturers a range of focus groups of 4-5 students will be conducted using an adapted version of 'The Student Experience of Teaching, Research and Consultancy' developed by Healey, Jordan and Short (2002).
7	What will be the outcomes of this project? The outcomes of this project will be the completion of the thesis and potentially presentation at relevant conferences. There may also be the opportunity of peer reviewed publications of different aspects of the research.
8	Tick one: ☐ Staff research ☒ MPhil / PhD research ☐ EdD research
9	Is the project subject to an **external** funding bid? ☐ Yes *(please complete questions 10- 14)* ☒ No *(please go to Section B)*
10	Bid amount:
11	Bid status: ☐ Not yet submitted Submission deadline: ☐ Submitted, decision pending ☐ Bid granted
12	University Project Finance Team costing approved with Dean's signature: Yes: ☐. No: ☐ (Please see Faculty Research & Enterprise Officer as soon as possible)
13	Peer Review ☐ obtained ☐ not yet obtained
14	Partners & Institutions: Name (including title) / Faculty: / Institute / Organisation:

Part B: ETHICAL REVIEW STATEMENT

The purpose of this statement is to clarify whether the proposed research requires ethical clearance through an Ethics Protocol. Please note the following before you complete your statement:

An Ethics Protocol is required for any research study involving human participants. Such a study involves the gathering of data about people through intervention or interaction with them or the gathering of identifiable personal information about people.

- 'Intervention' involves manipulations of a human environment performed for research purposes (e.g. field testing the impact of new curriculum).
- 'Interaction' involves communication or interpersonal contact between researcher and research participant(s), e.g. interviews, questionnaires).
- 'Gathering identifiable personal information' includes data obtained by observation or from records or documents not already in the public domain and from which an individual can be identified.

'Research involving human subjects' **does not include** the following data gathering activities:

- Research involving the use of publicly available information or archival material;
- Research involving the secondary use of data already in the public domain;
- Testing within normal educational requirements;

- Observation (e.g. of television programmes) where it can be assumed that participants are actively seeking public visibility.

Studies involving data already in the public domain do not require an Ethics Protocol.

Please complete the following, ticking the categories into which your proposed research fits:

	Data collection / analysis involved:	**Action required:**	
1	This study does not involve data collection from or about human participants.	➢ *Complete this Ethical Review Statement and add a brief (one page) description of your research and intended data collection methods.* *No ethics protocol required.*	☐
2	This study involves the analysis or synthesis of data obtained from/about human subjects where such data are in the public domain (i.e. available in public archives and/or previously published)	➢ *Complete this Ethical Review Statement and add a brief (one page) description of your research, the nature of the data and intended data collection methods.* *No ethics protocol required.*	☐
3	This study involves the analysis of data obtained from/about human participants where the data has been previously collected but is not in the public domain	➢ *Complete this Ethical Review Statement* ➢ *Please complete Part C – Ethics Protocol Proforma*	☐
4	This study draws upon data already collected under a previous ethical review but involves utilising the data in ways not cleared with the research participants	➢ *Complete this Ethical Review Statement* ➢ *Please complete Part C – Ethics Protocol Proforma* ➢ *Submit copy of original ethics protocol and additional consent materials (if relevant) attached.*	☐
5	This study involves new data collection from/about human participants	➢ *Complete this Ethical Review Statement* ➢ *Please complete Part C – Ethics Protocol Proforma* ➢ *Submit information for participants AND consent forms in style and format appropriate to the participants*	☒

Please Note: Should the applicant wish to alter in any significant regard the nature of their research following ethical approval, a resubmission should be made to the Faculty Research Ethics Committee. The resubmission should be made with reference to one or more of the categories laid out in this document. 'Significant' should be interpreted as meaning changing in some fundamental way the research purposes and processes in whole or part.

Applicant contact information:
Address: Cathy Schofiled
Email: cathys@truropenwith.ac.uk
Fax:
Telephone: 01872 267517
Signed:
Date: 25th May 2012
For MPhil / PhD / EdD research:
Director of Studies: Pauline Kneale
Signed:
Date: 25th May 2012

Faculty Approval:

1. Research not involving human subjects.
Research has been agreed by the Faculty Research Ethics Committee as not requiring ethical approval
Signed: **Chair, Faculty Research Ethics Committee** **Date:**

2. Research requiring an Ethics Protocol
Confirmation of Ethics Approval (following consideration by Faculty Research Ethics Committee, or Chair's action)
Signed: **Chair, Faculty Research Ethics Committee** **Date**

Part C: ETHICS PROTOCOL PROFORMA

Please indicate how you will ensure this research conforms with each clause of the University of Plymouth's *Principles for Research Involving Human Participants.* Please complete each section with a statement that addresses each of the ethical principles set out below. Please note that you should provide the degree of detail suggested. Each section will expand to accommodate this information.

Please refer to Appendix 2 when completing this proforma.

1	**Informed consent** *Please attach copies of all draft information / documents, consent forms, questionnaires, interview schedules, etc intended for the participants, and list below.*
	All potential participants will be emailed with full details of the purpose and procedure of the study and my contact details to enable them to ask any questions prior to giving consent. It will be clearly stated on the questionnaires to lecturers that consent will be assumed by its return to me. Consent from participating students will be gained at the meeting prior to data collection when the purpose and procedure will again be discussed and all questions answered. The student participating in the Student Learning Experience Diary phase will also be informed that whatever their choice regarding participation will in no way impact upon their assessments or their relationship with the institution or tutors.
2	**Openness and honesty** *It is generally accepted that research with human participants would not involve deception. However if this is not the case, deception is permissible only where it can be shown that all three of the following conditions have been met in full.* 1. *Deception is completely unavoidable if the purpose of the research is to be achieved.* 2. *The research objective has strong scientific merit.* 3. *Any potential harm arising from the proposed deception can be effectively neutralised or reversed by the proposed debriefing procedures.* *Applicants are required to provide a detailed justification and to supply the names of two independent assessors whom the Committee can approach for advice. Please attach relevant documentation and list below.*
	No deception is necessary for any part of the study. Full information about the prupose of the research will be made clear at the first point of contact.
3	**Right to withdraw** *Please ensure that you provide a clear statement to this effect.*
	All participants will be made aware of their right to withdraw when informed consent is sought. Participants are free to withdraw, without penalty or prejudice, at any point throughout the data collection process. Once the questionnaires and diaries have been received it will not be possible to withdraw their responses due to the anonymity of this data. Similarly, student taking part in the focus groups can withdraw at any point up to the debriefing by leaving or remaining silent however they cannot withdraw any data they have thus far contributed.
4	**Protection from Harm** *Indicate here any vulnerability that may be present because of the:* ○ *participants e.g. children or vulnerable adults.* ○ *nature of the research process.*

	If you tick any box below, please indicate how you will ensure protection from harm. *Does this research involve:* *Children* ☐ *Vulnerable adults* ☐ *Sensitive topics* ☐ *Permission of a gatekeeper in place of consent from individuals* ☐ *Subjects being academically assessed by the researcher* ☐ *Research that is conducted without full and informed consent* ☐ *Research that could induce psychological stress and anxiety* ☐ *Intrusive intervention (eg, vigorous physical exercise)* ☐ *Do ALL researchers in contact with children and vulnerable adults have current CRB clearance?* Yes: ☐. No: ☐ N/A: ☒ *If Yes, Please give disclosure number(s).(Use extra sheet if necessary)*
	Name *Number*
	If No, please explain:
5	**External Clearance** *I undertake to obtain written permission from the Head of any external institutions (school, social service, prison, etc) in which research will be conducted. (please check box)* ☒
6	**Participant/Subject Involvement** *Has this group of participants/subjects already been the subject of research in the current academic year?* Yes ☐ No ☒
7	**Payment** *Please provide details of any payments, either financial or in kind, made to participants for participation, compensation for time given, etc.*
	No payment will be offered for participation.
8	**Debriefing** *When? By whom? How? Please ensure that you provide a clear statement to this effect.*
	Cathy Schofield will undertake the debriefing via email upon receipt of returned questionnaires, at the post data collection meeting for the student diarists and at the end of each focus group. During the debriefing the participants will be thanked for their contribution and asked if they have any comments or questions regarding the process they have undertaken. They will be asked if they are still wiling to have

	their data included in the study and be offered the opportunity for a summary of the results upon completion of the project.
9	**Dissemination of Research** *Please provide a clear statement regarding what information has been provided to participants regarding dissemination of this research.*
	A summary of results will be offered to all participating lecturers and students who take part in the research. Email addresses will be gather and used to disseminate the findings.
10	**Confidentiality** *Please ensure that you provide a clear statement to this effect.*
	Confidentiality will be assured to all participants at the outset of the study. The questionnaires and diaries will be anonymised and no links will be able to be made to any individuals or institutions. The interview data will only be accessed by the researcher and her supervisors. To ensure confidentiality of this data all references to individuals (participants, researchers or institutions) will be by the application of pseudonyms to protect their identity. **The data will be kept for ten years in a locked cabinet and will then be destroyed in line with Plymouth University's ethical policy.**
11	**Ethical principles of professional bodies** *Where relevant professional bodies have published their own guidelines and principles, these must be followed and the current University principles interpreted and extended as necessary in this context. Please state which (if any) professional bodies' guidelines are being utilised.*
	Plymouth University

Appendix 3.10 Information and consent sheet TRS

My name is Cathy Schofield and as part of my Doctoral studies I am undertaking a project in order to better understand the research-teaching nexus in different types of institution responsible for delivering higher education courses.

Aim

This study is aiming to establish the range of scholarly activity undertaken by lecturers in different institutions delivering higher education and their views on the teaching-research nexus.

Assurances

If you agree to take part in this research you have the right to withdraw at any point up to submission, without penalty. Receipt of your completed questionnaire will be deemed as agreement to have you data used within the study.

Your data and identity will remain anonymous throughout the study.

Instructions

The study requires data to be collected from lecturers who are currently teaching on level 5 modules on social science programmes and who have been responsible for teaching at higher education level for the past three years.

As a participant all that is required of you is to complete a set of questionnaires which should take about 20 minutes. There are no foreseen disadvantages to taking part in this research.

Consent

I confirm that:

- I have read and understood the information sheet about this study
- I have had any questions answered that I asked
- I understand that I have the right to withdraw form this research at any point until submission of the questionnaire
- I understand that my results will only be seen by the researcher and her supervisors, and that the data will be stored in a locked facility for a period of 10 yrs with no identifying features attached to it, and then destroyed as per university policy. It has also been made clear that my anonymity will be maintained within any work that is published as a result of this study.

On this basis I agree to participate in this research:

Signed: _____ Dated: _____

If you require any further information or wish to contact me regarding this study please email me on cathys@truro-penwith.ac.uk or 01872 267517

Appendix 3.11 Classroom observation Information and consent sheet

My name is Cathy Schofield and as part of my Doctoral studies I am undertaking a project in order to better understand and examine the student learning experience with respect to the teaching-research nexus.

Aim

The aim of this research is to investigate teaching styles in different types of institutions that deliver higher education courses. In order to do this, one student will gather data for a week in order to give a snapshot in time of a level 5 social science student learning experience. Recoding's should only be made of teaching and learning session, not including personal tutorial or pastoral sessions.

Assurances

Your identity will remain anonymous; the only data being taken apart from the recorded session is what type of institution the data has been collected from. All that will be extracted from the recordings will be the length of time spent on certain aspects of elements of delivery, no other information will be considered.

The data collected will be kept securely and no one, other than the researcher and her supervisor, will have access to it. This information will not be shared with any third party.

You are not required to take part but it would be helpful to have complete data sets for each institution in order to best understand the student learning experience. If you have any questions please do not hesitate in contacting me on cathys@truro-penwith.ac.uk or 01872 267517.

Consent

I confirm that:

- I have read and understood the information sheet about this study
- I have had any questions answered that I asked
- I understand that I have the right to withdraw form this research at any point, without penalty and to have my data destroyed
- I understand that my results will only be seen by the researcher and her supervisor, and that the data will be stored in a locked facility for a period of 10 yrs with no identifying features attached to it, and then destroyed as per university policy. It has also been made clear that my anonymity will be maintained within any work that is published as a result of this study.

On this basis I agree to participate in this research:

Signed: _____ Dated: _____

If you require any further information or wish to contact me regarding this study please email me on cathys@truro-penwith.ac.uk or 01872 267517

Appendix 5.1 Definition of themes

Lecturers definitions of *research* and *scholarship*

Theme: New knowledge construction and communication

Three codes were included within this theme; the *creation of new knowledge*, the *process of knowledge construction* and lastly *dissemination*. With respect to the code *creating new knowledge* statements needed to include a reference to *new* or *novel* knowledge resulting from the product of research endeavours. Any references respondents made which were coded as the *process of knowledge construction* fell along a continuum of research processes; from the development of hypotheses through to the designing of systematic data collection and analysis methods using either qualitative or quantitative techniques. The definitions linked to *dissemination* were academic activities that might normally be associated with outputs, the most commonly occurring were writing activities often with reference to peer-review process.

Theme: Lecturer's learning

The most commonly occurring code was that of *individual knowledge acquisition.* This was differentiated from *creation of new knowledge* where no reference was made to the *newness* of the information gleaned. Most commonly, for both definitions of research and scholarship, the statements referred to scholarship, reading and keeping abreast of subject knowledge. This was again differentiated from *interactive knowledge acquisition* where references were primarily made to learning and sharing knowledge through discussion, debate, workshops and conferences.

The code *development of professional practice* was where respondents related to advancement of skills and practical aspects of the role as a separate entity than the development of knowledge. The element of *qualifications* was included where definition was made to specific academic qualifications rather than ambiguous references to learning.

Theme: Teaching and learning practice

The code of *enhancing student learning* refers to responses that focused solely on the students' development, whereas *informing pedagogic practice* relates to the development of the teacher within that role. The types of references made by respondents related to general benefits such as the improvement of their teaching practice, and research-informed teaching, or specific factors such as developing the curriculum.

Theme: External links

In order to be included in the code of *consultancy* there had to be specific reference to the act of consultancy. The code of *application* included innovative use of theory or links to policy. The references to *industry* included reference to business, industry or specific sectors.