Student experiences of the relationship between teaching and research / consultancy: the case of a new university

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Abstract

The relationship between research and teaching in higher education has been the subject of much academic inquiry and research activity over the last decade and a half. The majority of these investigations have been conducted from the perspective of the academic teacher and researcher, but recently there has been a growth of interest in asking about the nature of the student learning experience in relation to research, and this study adds to what is known about the way students understand and experience (staff) research.

Firstly, it may be argued that learning through teaching and research is the primary function of higher education. Secondly, the integration of research with teaching finds a resonance with the enhancement of learning through inquiry that it promotes. The rise in interest in academic scholarship and professional and pedagogic development has also promoted new approaches to academic work, where the division between research and teaching is seen as simplistic, and overlooking critical linkages. So the nexus is complex and not necessarily one-way, with teaching having an equal share in the balance.

The research uses a mixed-method approach over two stages of data collection. Initially an electronic questionnaire survey is conducted to obtain an appropriate sample population of students and to determine the aspects of the student learning experience to be tested further in the subsequent small-group discussions. These discussion groups build on the questionnaire to explore the issues it raises, and allow students the chance to develop and articulate their experiences of and beliefs about, teaching and research. Nearly 200 students figure in the questionnaire survey and 17 are included in the subsequent small-group discussions. There are both undergraduates and postgraduates at each stage of the data collection. The research takes place in a single new university and is the first to ask students explicitly about consultancy, seen as a complement to previous investigations specifically into research .

From the research undertaken it can be concluded first that students are generally positive about research and consultancy. There are disciplinary differences in the findings which support the findings of previous student-centred research, as well as variations between levels of study. It is argued that the negative consequences of research and consultancy can be largely resolved through readdressing staff-student relationships and effective management of the relationship between teaching and research at departmental level. A model of student learning is proposed which responds to the main findings of this current research by reconceptualising the relationship between academic staff and students. The relationship between research and teaching is central to this model.

Author's declaration

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire, and is original except where indicated by specific reference in the text, and as follows:

The online student experience questionnaire used in the investigation was created as part of a University of Gloucestershire Centre for Learning and Teaching (CLT) / Scholarship of Learning and Teaching (SoLT) project, which was launched in February 2002 to examine the impact of University research and consultancy on students. The research team of Mick Healey, Fiona Jordan and Chris Short designed and piloted the questionnaire. Subsequently, once appointed and funded by the CLT / SoLT project as research assistant, the work presented here has been all my own.

No part of this thesis has been submitted as part of any other academic award. The thesis has not been presented to any other institution in the United Kingdom or overseas.

Any views expressed in this thesis are those of the author and in no way represent those of the University.

Signed:.....

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Chapter One Introduction

1.1 The context of the research

The question of whether and if so how teaching is linked to research and consultancy in universities is of great contemporary significance. Educators, politicians and academics are asking these questions in a climate of increasing competition for research funding and students. The higher education system is changing with the move to mass education (Clark, 1997); and in the UK, the introduction of tuition fees, the shift to modular degree courses and extensive re-branding of universities are all highly visible effects. The larger numbers of undergraduate students can create a need for an organised and codified approach to elementary learning, particularly in disciplines where the research frontier is a long way from first year study. This gives rise to so-called 'service courses' catering for large and diverse groupings of students in need of the same corpus of technical knowledge (Robertson & Bond, 2001).

Research in particular has fallen under ever increasing scrutiny from government funding agencies, as its value to the new knowledge economy is recognised. This value extends through the creation of academic disciplines with new ways of conducting research in response to the changing nature of knowledge (Brew, 1999) and is leading to the growth in importance of academic consultancy as part of diversification and the scholarship of application (Boyer, 1990). This allows academic staff to use their skills outside the university and to make partnerships that bring both financial and intellectual gain.

In all disciplines the trend from 'simple to complex knowledge' (Clark, 1997: 246) places new research work further from undergraduates than ever before. Research is increasingly taking place across as well as within disciplinary boundaries and the intensification of interest in academic development and pedagogic research brings together academics from all disciplinary cultures in new 'academic communities of practice' (Brew, 2002: 3), facilitated by electronic communication.

At the same time, a rise in the number of vocational courses offered by universities (Durning *et al*, in press), the spread of modularity in undergraduate programmes redefining student–teacher relationships (and again, relationships between learners and knowledge (Brecher, 2002)), and the growth of postgraduate studies requiring closer and more sustained relationships with teachers than with undergraduate programmes (Lindsay *et al*, 1998) are all changing the nature of disciplinary study in higher education.

If academic research is in crisis (Brew, 2001), it is nonetheless increasingly big business (Barnett, 1992) and forms a large part of many universities' identity, with newer universities keen to make their mark by conducting competitive research (Brown and McCartney, 1998). Research is the principal occupation of many academics, and the ability to secure research funds and publications is of great importance in academic career plans and institutional reward strategies alike. It is against this background that Peter Scott, Vice-Chancellor of Kingston University, writes, 'The conventional view holds that the separation of teaching and research is inevitable, because it enables both activities to become more professional' (Scott, 2002: 27).

At the same time, the status and provision of teaching in higher education are also under review. In a critical inquiry into the relationship between research and teaching, Elton (2001) says of those who carried out external teaching evaluations for the Teaching Quality Assurance exercise (TQA) in 1995 that, 'their teaching abilities [were] largely unknown in an academic culture where teaching is an essentially private activity conducted by amateurs' (Elton, 2001: 44). If this contributes in part to explaining why TQA scores correlate with Research Assessment Exercise (RAE) scores during this round of evaluations, it also questions the status of teaching as a university activity – a question that is put elsewhere by Gibbs when he addresses the functional separation of teaching and research that departments are sometimes obliged to effect:

> 'I assume that if departments did not make such policy decisions [reducing teaching commitments], and instead placed an equal emphasis on research and teaching, then there might well be a much clearer positive correlation between research excellence and teaching excellence' (Gibbs, 2002: 9).

Recent growth in interest in the scholarship of teaching, whose implementation requires 'developing the status of teaching [and] developing the complementary nature of teaching and research' (Healey, 2000: 169), is allowing academics to research how it is that effective learning takes place. Indeed, scholarly practice is identifiable with a concern for excellence in all professional activities, and the place of the scholarship of teaching alongside the scholarship of (discovery) research tends to emphasise similarities in content and method (Healey, 2000).

Building on the work of Boyer *et al* (1990) in the United States, ways are sought to improve practice and take account of the different ways in which academics act rigorously, reflectively and in the goal of student learning. Scholarship can be understood as an entire approach to one's duties as an academic, and particularly in relation to the scholarship of teaching, an attempt to understand how the learning process is best enhanced through pedagogic practice. In this respect it is part of a student-centred approach to higher education. The role of scholarship in drawing together strands from the different areas of activity that academics engage in, as well as maximising students' chances of playing an active role in their own education, is a recurring theme in this investigation.

An understanding of the relationship between teaching and research in current academic practice is also vital if one is to make sense of how higher education is conceived, delivered and experienced by those who participate in it. The two activities are the archetypal functions of the institution of higher education, as well as being inextricably related in many academic participants' minds (Colbeck, 1998; Brew, 2001). That this vexed question is, ultimately, one of wide-ranging moment for higher education worldwide, is encapsulated here:

> 'No issue is more basic in modern higher education than the relationship between research and teaching' (Clark, 1997: 241).

The reasons for the pre-eminence of the question of the relationship between research and teaching when reflecting on the nature of higher education in the modern university derive from several observations, all previously set out elsewhere in the academic literature treating this question:

- The majority of universities (in the UK) combine their teaching programmes in some way with research, or the outputs of research. Many make explicit claims about how students will benefit from studying in a research-rich environment (Zamorski, 2000); at the least, research is supposed generally to benefit the university as part of its *raison d'etre*;

- There exists the common-sense view for many members of research-active academic staff that their research does or should improve their teaching, whether through the content of what is taught or the method of teaching itself (Jensen, 1998; Millar, 1991; Smeby, 1998). This, at the level of the individual, forms part of the debate on scholarship in higher education.

- It was widely discovered (Feldman, 1987; Hattie and Marsh, 1996) during the second half of the 20th century that no statistical relationship could be shown between the outputs of research (publications, grants obtained, citations and so on) and measures of teaching quality (usually student evaluations of teaching). The lack of any such link led to the widespread belief that research and teaching were in fact discrete activities.

- Previous work (Kolb, 1984) in education suggests that students' learning is improved when they participate in problem-based inquiry as a part of their curriculum. This points to the potential value to student learning of the sort of problem-based research often conducted by academic staff.

- The nature of contemporary higher education is such that the way students acquire knowledge and skills is driven by diverse agendas and is increasingly developing outside the university. This foregrounds the academic relationship between staff and students as the main point of encounter within the academy of the two major functions of the university: the discovery and transmission of knowledge.

The focus of this investigation on student learning as *process* (Brew and Boud, 1995) is inspired by views of higher education that stress the open-ended and cyclical nature of learning (e.g. Barnett, 1992; Kolb, 1984; Elton, 2001). Research-rich or research-led (see section 1.2) teaching can then contribute to better learning as it mirrors the process by which knowledge is discovered. It is

recognised that knowledge and the process of enquiry have different acceptations in different disciplines and that this affects what sort of research and teaching paradigms obtain among groups in the academic community.

The aim of making sense of the experiences of others, fundamental to this research study, is seen as central to the role of social research. In addition, through research methods that favour interpretation and in-depth understanding it is sometimes possible to answer key questions that have otherwise proved resistant to conclusive analysis. In this case the research questions asked (see section 1.7) are such that only an interpretive method will provide answers of the right form: that is to say, representative and descriptive of the process of learning as it is experienced by the learner.

This study attempts to make a timely addition to the body of academic literature that addresses the relationship between research and teaching, and it makes this claim for four principal reasons:

- There is as yet only a small body of published research (Jenkins *et al*, 1998; Willis and Harper, 1999; Zamorski, 2000) that investigates the student experience of research in higher education, and there are many calls for further investigations of the sort.

- No previous study has challenged students to reflect upon and discuss their awareness of consultancy as a distinctly modern practice.

- The views of both postgraduate and undergraduate students are drawn upon, and the research design brings together both levels of study in the data gathering.

- The study uses a quantitative data-gathering method to inform the structure of the qualitative small-group discussions that follow. This mixed-method approach is explained in Chapter Three.

Ultimately then, the importance of the question of the relationship between teaching and research derives from its implicit relevance to many areas of higher education policy and practice. Here, it is particularly in relation to the debate on the

benefits of the teaching–research *nexus* that the findings are intended to resonate because the purpose of this study is specifically to investigate taught students' understanding and experience of research and consultancy, as those in receipt of the universities' teaching programmes.

The term *nexus* is used in the goal of stressing the interconnectedness of the terms involved, in preference to the less dynamic 'link' or 'connection', though 'relationship' expresses much the same idea. The nexus is seen as a package of concepts, research and pedagogic tools and beliefs about the nature of knowledge and learning that academic staff operationalize when approaching their research and teaching functions in a scholarly manner. It suggests very strongly their interdependence and mutual compatibility, ideas that nonetheless run counter to the way in which universities are funded and administered in the UK and elsewhere (Jenkins *et al*, 2003).

Scholars who have written in support of the nexus have tried to show how benefits to universities, individual members of academic staff and students may be expected to accrue. Clark (1997) defends a compatibility thesis of teaching and research, where the two are seen jointly as constitutive of an inquiry-based approach to aiding student learning. The learning that takes place is the integrating element. This picks up the work of Ludwig (1996) and Colbeck (1998) who agree that in looking at the ways academic staff divide effectively their time between research and teaching, the researcher or assessor ignores the ways in which the two are already naturally integrated. This integration is however the element of academic practice most likely to foster effective student learning and is besides an element of the academic scholarship that staff are encouraged to nurture:

> 'This integration exists for many academic staff as a given part of their role and 'the idea of research-based teaching and learning has become deeply entrenched in academic thought' (Clark, 1997: 246).

Academic articles have been produced questioning whether such a nexus exists (e.g. Barnett, 1992; Rowland, 1994), and the larger share of quantitative research so far carried out into the nexus' existence shows little or no relationship between research productivity and teaching excellence (Hattie and Marsh, 1996). However, it is only recently that the focus of critical reflection on and research into this

question has shifted from quantitative attempts to test the efficacy or productivity of staff who are active in both research and teaching to addressing the learning experiences of students.

Universities often base their claims to excellence in teaching (and to the quality of student learning experiences) in part on the quality of the research undertaken at the University, particularly where the two are directly linked through research-led teaching (Zamorski, 2002). In doing so they call upon images of staff and students working together, where the commitment to discovery is what unites teacher and learner and 'research activity is the glue that holds together teaching and learning' (Clark, 1997: 244). Such a model has been influential in shaping the way universities conceive and present their courses, and there are elements of higher education systems worldwide that fulfil these conditions (Clark 1997; Woodhouse, 1998). This may be thought of as a 'master-apprentice' model.

In practice, there are already many ways in which research and teaching have occasion to meet in higher education, and as reported by Brew (2001), 'For many academics, teaching and research are simply different facets of academic life and it is difficult to tell where one begins and the other leaves off' (Brew, 2001: 145). The rest of this introductory chapter sets out the key themes in investigating how far this is also the case for students.

1.2 Definitions of teaching, research and consultancy

The question of what is meant by the terms research and consultancy is ultimately resolved for this investigation through appeal to the students themselves. However, it is recognised that different interpretations are involved in what is an international and multidisciplinary debate.

One explanation of what research is serves as a starting point for the inquiry. It also shapes the research's methodological approach (see Chapter Three), and is expressed by Brew (2001) as follows:

> 'Research is a systematic process of developing our knowledge of the world and our relationship to it' (Brew, 2001: 64).

Brew (2001) offers an illuminating account of the contemporary nature of research and refers to it also as:

> 'That rich tapestry of questions about how we come to know and in what that knowing consists' (Brew, 2001: 9).

Research is about knowledge, but currently occupies an uncertain place in academia because, 'its philosophical and empirical bases are in disarray' (Brew, 2001: 11).

Research-led teaching and learning is a concept that Zamorski (2000) investigates. Her understanding of the term is: 'as teaching which is informed by their own (or by others') recent or cutting edge research, or where research with or by students forms part of the pedagogy or content of a course or seminar' (Zamorski, 2000: 11). It is important to note that the university where this present study takes place does not make special claims about research-led teaching and learning but that in common with most universities, does have research units that combine research and teaching.

This is the first study to investigate student experiences of consultancy. This was identified as a gap in the literature and a valuable complement to questions about research in the current climate. It may be thought of as applied research, where academics are employed to bring their expertise to areas outside the university. It is expected that consultancy activities form a major part of student understandings of research in some of the professional and applied disciplinary areas such as Business, or Leisure, Tourism, Hospitality & Sport and Nursing, Social Work or Engineering, for example.

Teaching is conceptualised differently by teachers across higher education but it is considered here that the conception put into practice by the teacher can be related closely to students' own strategies for learning (Prosser and Trigwell, 1999). According to Ramsden (1992) the aim of teaching 'is to make student learning possible' (1992: 5). Broadly, teaching may be seen as the process of transferring information from the syllabus to students or as the attempt to change students' perceptions of the subject matter of their study (Brew, 2003). In the first

case the teacher is the focal point, in the second, it is the student. The student learning approaches associated with these two styles of teaching are respectively 'surface' learning and 'deep' learning.

It is suggested that the deep approach to learning, emphasising the construction of knowledge, is more appropriate to the aims of the undergraduate curriculum than the surface approach, which emphasises the imparting of knowledge (Hattie and Marsh, 1996). To complete the logic of these assertions, the sort of teaching that is desirable in undergraduate education is that which promotes deep learning (Gibbs, 1992).

1.3 The role of the university

An important first step in evaluating students' understanding and experience of research and consultancy consists in recognising that many of our ideas about higher education and universities come directly from thinkers such as Humboldt (1970) and Newman (1976), men concerned with defining what should be the purpose (or 'mission-idea' (Luque, 2002: 1) of the modern university as it was then, in different stages of its infancy. Ideas about the conceiving and setting up of institutions of higher education were shaped in rapidly industrialising societies, where higher education was not yet intended for the masses and scientific investigation was an increasingly dominant paradigm of scholarship.

Here, in tracing the history of the liberal university, Wegener offers a timely reminder that the role of a university in a society is one forged at a certain time by particular forces:

> 'That these structures had to be invented – discovered and constructed – and that originally they were experiments in modes of organisation of human energies the future and consequences of which no one could fully foresee, may be as mysterious to us as any other act of creation' (Wegener 1978: 3).

What takes place within the academy is the result of a mixture of idealism, the needs of the society in question and ideas about what counts as knowledge. For example, American universities worked more deliberately in the service of the national economy during the cold war when they adopted the national purpose of

opposing communism (Wegener, 1978). Some part of that linkage was maintained as the state found subsequently that 'the university is the only institution that is in a position to integrate vast amounts of knowledge in a meaningful way' (Gonzalez, 1998: 2).

This observation is now being challenged in more economically liberal times where communications technology abounds since according to a social policy unit report, 'for the first time in history, knowledge is the primary source of economic productivity' (Seltzer and Bentley, 1999: 9). The challenge universities face is that:

> 'Many of the recent national policies on higher education have focused on developing students with certain skills and orientations that will aid both their employability and national economic performance' (Jenkins *et al*, 2003: 24).

The independence of universities to decide on what knowledge to integrate and teach is cast as compromised by other overarching national priorities such as the job market and their own economic viability.

The following assertion expresses the central issue at stake for universities:

> 'Achieving the proper balance between the discovery and the transmission of knowledge is a major challenge for research universities' (Volkwein & Carbone, 1994: 147).

In this connection the publication in the UK in January 2003 of the Government White Paper on Higher Education provides a context for this current research, as well as a yardstick by which to judge later whether actual student learning experiences are in fact being taken into account in contemporary educational policy.

An appraisal of the current state of the debate about the teaching – research nexus can be made through a recent assessment of its role:

> 'In view of the central nature of research and teaching in HE and the almost universal assumption that research benefits teaching, and the importance of scholarship, it is perhaps surprising how relatively few institutions have specific policies in place to either monitor or to develop and maximise these beneficial synergies' (JM Consulting, 2000: 16).

This statement, from a report undertaken as part of the Higher Education Funding Council for England fundamental review of research (HEFCE, 2000) suggests that the existence of a beneficial research-teaching nexus is still widely accepted in practitioners' and commentators' views on higher education, but that something is preventing it being integrated successfully into practice. The 'almost universal assumption' mentioned is nonetheless under threat, as Elton reminds that, 'in the past, no genuine mass higher education system has been able to expand research in line with teaching' (Elton, 1992: 258).

This reading of the situation in the UK stands in contrast to national policy in some other countries. For example, the head of the New Zealand Academic Audit Unit describes the legal requirement that research and teaching be closely interdependent in public higher education. This in practice involves ensuring that most teachers in higher education are also involved in research. The Unit's remit goes beyond merely checking that this is the case however, as they are also involved in demonstrating how the link is beneficial (Woodhouse, 1998).

Noting that the concentration on research is only a relatively modern phenomenon in UK universities, Brown and McCartney (1998) assess the historical perspectives on the role of the university. The table below shows these five perspectives as they relate to the pursuit of teaching and research.

Table One Features of differing models for the university

	Perspectives on the Role of the University				
	Advancement of knowledge	**Dissemination of knowledge**	**For the development of the labour force**	**For society's changing needs**	**Pluralistic (multi-purpose)**
Research	Discovery research valued highest, some methods training	Better to take place in separate institutes	*Applied* research to improve work	Academic freedom lost	Pure and applied and related closely to undergraduate curriculum
Teaching	Takes place through inquiry alone or elsewhere	Traditional dissemination model of teaching	To prepare workers: linked to research	So that students improve their society	Through inquiry-based curriculum
Teaching-Research nexus	Possible though incidental to other research & teaching aims	Only as all research affects what is known	Key part of giving workers required skills in changing market	Good but highly directed towards society's goals	Potentially symbiotic as motor of learning community
Training	For furtherance of methods of inquiry	Knowledge seen as vital for life	Direct training of professional labour	To play full role in desired society	Provides qualified members of society
Social role	Place where knowledge is valued and created	Passing on findings to society through students	Better qualified and trained workforce	Is all. Pursuit of knowledge linked to societal directive	Houses divergent communities (of practice, Brew (2003))
Thinkers associated with model	Humboldt (1970), Flexner (1930), Truscott (1943)	Newman (1872)	Ascham (16th century)	Searle (1972)	Brew (2003)

The arrows indicate the strength of the relationship between research and teaching in each model

(adapted from Brown and McCartney, 1998: 119)

The pluralistic university, where different communities of practice are housed, contains 'a symbiotic relationship between teaching and research' (Brown and McCartney, 1998: 118).

1.4 The place of the disciplines in the teaching-research nexus

The organisation of courses by disciplinary field is a feature of the modern university which might be taken for granted, and indeed the debate on the teaching–research nexus is sometimes conducted as if the subject matter were all of a piece. The nature and amount of research that students are exposed to however differs by discipline, level and institution. This common-sense remark is seen again in the words of a higher education strategist: 'In practice, the way research is most likely to benefit undergraduates is likely to vary widely between departments within an institution' (Gibbs, 2002: 11). Jenkins *et al* (2003) say that 'The department is a critical unit of analysis, for this is generally the level at which disciplinary communities within institutions are organized' (Jenkins *et al*, 2003: 120).

Biglan (1973) explores the subject matter of different disciplines as it relates to development of knowledge and arrives at a categorisation of discipline-specific approaches. Academics' views are taken to be instrumental to student learning experiences, as they shape how students understand the role of the academic community and what sort of work is undertaken and accepted in their discipline.

Kolb's Learning Style Inventory (1984) shows how students' approaches to learning may be expected to differ with their techniques for appropriating knowledge and points of view. The predominant learning styles arrived at vary between disciplines and this is the logic underpinning this present study's focus on the disciplinary area of its student participants. The way students conceive their relationship to their discipline, whether as relatively passive consumers (e.g. of textbooks and lectures) or highly active participants (e.g. in research, study and departmental life), is crucial to their views on the place of research and consultancy in that discipline.

1.5 Scholarship and the teaching-research nexus

The role of scholarship in higher education is considered by some to bind together the intellectual strands shared by research and teaching (Elton, 1986; Boyer, 1990; Healey and Jenkins, 2000). Scholarship may be either disciplinary or pedagogic in nature but the central point is that staff should be immersed in the

conversations taking place in their field (Barnett, 1992). In this way academic staff who teach only are as able to develop a scholarly and informed approach to their work as research-active staff. Nonetheless, scholarship of any sort involves processes of reflection, dissemination and 'informed eavesdropping' (Barnett, 1992: 629) on relevant academic discourse: all elements of the research process.

Different areas of scholarship have been identified (e.g. by Boyer and colleagues (1990), see Chapter Two) and such a holistic approach is seen to have the additional advantage of valuing all aspects of the profession equally (Jenkins *et al*, 2002). The questions of the role of scholarship in the teaching-research nexus are returned to in Chapter Two, particularly insofar as student learning is held to benefit.

1.6 Research and knowledge

An early example of the way that the criteria and methods of deciding what counts as knowledge may influence profoundly students' experiences of learning and research is seen in the aims of Gilman for the modern university in the States one hundred years ago and of Humboldt (1970) in the nineteenth century. Both talked of the furtherance of science in general and spoke with approval of the promulgation of the scientific method in research. Gilman was satisfied that the scientific method was gaining purchase when applied to a large range of subjects (Wegener, 1978).

Their visions of universities devoted to the furtherance of science were not touched with the sort of disciplinary allegiances that colour modern images of the academic, and the ideals they left to higher education were infused with the conviction that the scientific method would revolutionise the way we lived.

One reason for the current importance of research in higher education is the desire of administrators and policy-makers in higher education to improve staff productivity (Colbeck, 1998). This drive seeks to maintain the place of universities as generators of knowledge in an age of super-complexity (Barnett, 2000) and increasing commodification of knowledge and information (Brew, 2001). To attain this status universities may tailor their principal output, research, to the designs of

government in order to win research funding and prestige. Such a view of the role of the university is summed up as the 'service to society's changing needs perspective' by Brown & McCartney (1998: 117).

Such pressure to privilege research outputs that can be bounded and quantified can mean that 'university rewards for achievement reinforce the perception that teaching and research are distinct activities with specific amounts of time allocated to them' Willis *et al* (1999: 1). This is a perception refuted by Clark (1997) who offers a compatibility thesis, where inquiry (after knowledge) is the distinguishing mark of an effective teaching and learning institution. The value of the inquiry process is also stressed in an article by the Vice-Chancellor of Kingston University:

> 'Just as it has become difficult to disentangle knowledge producers from knowledge users, so it is now difficult to say who is 'teacher' and who is 'researcher'. In a knowledge intensive society we all have to be researchers' (Scott, 2002: 28).

There are echoes here of Lyotard's (1979) *Report on Knowledge* in which the writer predicts that 'the nature of knowledge cannot survive unchanged in this context... it can fit into the new channels and become operational only if learning is translated into quantities of information' (Lyotard, 1979: 7). More widely this pattern is seen as part of the evolution of our relationship to knowledge on one reading of contemporary post-industrialised society, where the system favours only an optimisation of the relationship of financial and time inputs and outputs within it. This Lyotard (1979) calls 'performativity' (Lyotard:1979: 9) and within its purview fall academic outputs too. The rise of modular courses is testament to the way knowledge is now managed:

> 'Education becomes a commodity, students customers and teachers deliverers of products' (Brecher, 2002: 1).

Through research, and, nowadays, consultancy, universities are attempting to hold on to the security in the system that performance towards economic ends brings. This is changing the nature of research and requiring output-driven projects in disciplines where this approach is unfamiliar (Moses, 1990). What counts as viable research is determined by the needs of a knowledge economy and a mass student audience. However, this loss on the monopoly of knowledge once enjoyed by

universities is inextricably linked to the rapid development of information technologies and hence the spreading of centres of knowledge creation and legitimation (Webster, 2002). The engine of change in this respect is outside higher education, but the challenge for policy-makers and academics within is to retain something of the ideal of a liberal, inclusive and relevant education in the new century while ensuring that student learning experiences fit them for a world where, 'Students, teachers and professionals in the workplace are all learners and researchers as well as teachers' (Webster, 2002: 15).

In this respect Scott (2002) warns against universities becoming part of: 'the "old economy" of knowledge – and suffer the same fate as other "old economies"' (Scott, 2002: 28).

The appearance of uncertainty as distinctive of knowledge in the modern era means that action must be taken to ensure that:

> 'Students are enabled to begin to experience the space and challenge of critical inquiry (in all its personal and interpersonal aspects)' (Barnett, 1997: 110).

Gibbons *et al* (1994) describe the contemporary state of knowledge, where Mode 2 knowledge prevails over its predecessor and contemporary, Mode 1 knowledge. This second is of the traditional, disciplinary sort, generated by academic communities.

Mode 2 knowledge is trans-disciplinary, informed by practice and commercial interests and not necessarily produced in universities. It will shape the higher education of the future.

Moreover, if, as research by Rowland (1996), Colbeck (1998) and Robertson & Bond (2001) suggests, staff's views of research and its relationship to teaching are largely discipline-based, the changing understanding of knowledge generation and legitimation that characterizes higher education policy in the UK today may call for a less discipline-based approach from academic staff.

'But knowledge is now produced as much outside universities as within them. The generation of knowledge is no longer the preserve of university academics' (Brew, 2001: 64).

1.7 Research aims and design

Ultimately, the central questions of this study relate to student learning experiences. In order to find out how students experience research and consultancy as part of their learning the following research questions were set from the beginning:

- How do students in a new university experience research and consultancy?
- What benefits and disbenefits do students receive from the research and consultancy that takes place in their university?
- Do undergraduate and postgraduate students from different subject areas have different experiences of research and consultancy?
- How might the university use the teaching – research/ consultancy nexus to improve students' learning experiences?

Thus the principal aims of the research are to identify and investigate student views on and experience of the practice of research and consultancy in their institution (both staff and student research and consultancy). It is expected that students may experience research and consultancy in a variety of ways. These include where:

- The content of courses is informed by staff research and consultancy and students learn about research or consultancy methods (staff teach their research)

- They undertake their own research or consultancy projects (students do research)

- Teaching methods adopt a research-based approach, such as through problem-based learning (staff and students combine teaching and research)

Once student participants have reflected on their understanding of the terms, it is made clear to them that all these types of interaction between research/ consultancy and their learning experiences are appropriate to the research (see Chapter Three).

The research takes place at the University of Gloucestershire, a former College of Higher Education granted university status in 2001. With some nationally recognised research units and strong regional links, the University is developing its own character in a competitive market. The future of the University is nonetheless cast in a new light by the government's current policies on higher education, described in more detail in Chapter Two. The White Paper suggests that as a new university it will be encouraged to develop its work outside of traditional discipline-based research, which will in turn affect the way teaching and research are prioritised and managed.

> 'Interdisciplinary concerns are perhaps growing in importance both in research and in terms of undergraduate and postgraduate curricula – particularly in the context of professional courses such as nursing and tourism' (Healey and Jenkins, 2002: 52).

Third stream funding will reward collaboration with regional enterprise and further diversify the practice of academic research through consultancy.

The research is designed to explore the views of selected students from final-year undergraduate and postgraduate taught courses in several subject areas. These are the students most likely to have encountered research or consultancy and are at levels of study that involve independent research work (such as the dissertation).

The focus on a single institution is common to previous research on student experiences (Jenkins *et al*, 1998; Zamorski, 2000; Lindsay *et al*, 2002) and ensures that all participants share the same context for their learning experiences. The research will add to this body of work and its conclusions bear directly on the claim that:

> 'A positive research – teaching link primarily depends on the nature of students' learning experiences, resulting from appropriate teaching and learning processes, rather than on particular inputs or outcomes (Elton, 2001: 43)'.

So it is that the present research aims to interpret views on research and consultancy from students in different fields as they reflect the standpoints of recipients of contemporary modular courses, some with traditional disciplinary roots and others more vocationally orientated.

1.8 Methodology

In support of the project design the methodology attempts to get as close as possible to students' understanding and experiences of research and consultancy. A key step in this approach is that of methodological triangulation, as described first by Denzin (1970). The word derives from the image of the land surveyor using triangulating equipment to get two different fixes on the same point and so a better appreciation of its features. The relevance of this image to sociological research is set out in Chapter Three.

An electronic questionnaire survey forms the first stage of the data collection process and is then used to inform the second stage, a series of small-group interviews with final-year undergraduate and postgraduate taught students. The results from the questionnaire are analysed and the transcribed verbal interview data coded in order to give a sense of students' general priorities and level and subject-specific perspectives. Overall analysis of the data involves bringing together the two sets of results and looking for correspondence or difference in emphasis in the quantitative and qualitative findings.

This research is carried out in the belief that the relationships between students and their courses and teachers are not static or simply 'out there' to be discovered. Whilst it is certainly expedient to take an inventory of student learning experiences through the questionnaire before preparing a useful interview schedule, it is felt that the richest data comes from the small-group interviews. The theory behind this is phenomenological because the social reality under investigation (i.e. the students' experiences of being in such and such a relation to research and consultancy) is seen as partially created by the students themselves and, further, 'inter-subjective' McNeill (1985), created amongst themselves.

This suggests that small-group interviews will help bring out the shared elements of much of the social reality amongst the participants even as they hear their own experiences potentially articulated by others. Translated into a research method this means that the study is phenomenonographical. It attempts faithfully to write about (graph) the experiences of others (phenomena).

1.9 Structure of remainder of thesis

The next chapter surveys and analyses the existing literature relevant to this research. The majority of work touching directly on the teaching–research nexus has been produced within the last fifteen years and little that makes reference to student experiences exists before the early nineties. Chapter Three explains in more depth the research methodology used and how it emerges from a broader philosophy of research. The data collection and analysis stages are described and the composition of the sample population made clear. Subsequently Chapters Four and Five present the results of the research in thematic form. As well as looking at the benefits and disbenefits ascribed to research and consultancy in the University these chapters attempt to interpret the level of involvement of the student in research or consultancy.

In conclusion suggestions about maximising the benefits to students are made, substantiated by students' own suggestions from the data in Chapter Five. The conclusions are contextualised by comparison with those arrived at by recent, similar studies. An ideal-type model of staff and student relations is arrived at,

through which the disbenefits that students identify in relation to research and consultancy are addressed.

Finally the policy implications of the main findings are discussed, particularly in the light of the UK government's White Paper and an influential recent text on management of the teaching-research nexus.

2.1 Introduction

> 'It has been a widely accepted assumption that there is an essential, indelible or synthetic link between university teaching and research... in the UK it probably held greatest sway between the 1950s and the 1970s when the university system was both relatively well-funded and elite in nature' (Hughes & Tight, 1995: 51).

The above quotation fairly summarises what might be thought of as a common sense model of the teaching–research nexus. Although it is seen in this chapter that not all participants in academic life agree with the above assumption, its potential value to academic teachers and researchers is explained through an analysis of recent literature that seeks to unpack the terms involved.

The second part of the claim above refers to the advent of mass education and the end of free education for undergraduate students in the UK. No longer either 'elite' nor 'relatively well-funded', universities find themselves competing for paying students in an increasingly diverse market, and this in turn raises the issue described first by the Australian academic Ruth Neumann:

> 'To date no studies have been located which directly examine the teaching-research nexus with a focus on students' views. Given that students are the recipients of university teaching, and that arguments in favour of the existence of a nexus claim the benefits to teaching of academic research, students are a most important group to consider' (Neumann, 1994: 324).

In carrying out an investigation of the sort called for here, this study occupies a distinct position with regard to past and contemporary literature on the subject of the teaching-research nexus. The intention of the research questions is that events and processes derived from research or consultancy that have had an impact on the student learner are identified. It is only recently that such a project has been seen to have a contribution to make to the understanding of the relationship between research and teaching.

So this study finds common cause with the contemporary literature in the field of the relationship between teaching and research seeking mediating factors that

shape the way it works through the practical delivery of courses in higher education.

In this respect it is seen that the field of inquiry into the nature of academic scholarship is of great relevance. Indeed, discussion of scholarship in higher education touches on the history of the modern university itself, and leads onto the wider question of what universities should be for.

Policy suggestions at departmental level are discussed in the belief that this is the crucial unit of organisation at which teaching and research can be integrated.

In turn, these topics require an understanding of the role that the disciplinary areas have played in shaping approaches to research and teaching, and hence, beliefs about the teaching-research nexus. Recent inquiries from the UK and Australia into academic staff's varying conceptions of research and of its integration with teaching are reviewed and what they tell us about differences between discipline paradigms is assessed.

Previous quantitative research is criticised for using inappropriate data in attempts to find out whether teaching and research are held in a logical connection, and as a result its validity is called into doubt.

Finally the key findings of previous student-centred research projects are summarised. The shared approach of these studies with the current investigation provides a ready point of comparison for the findings set out in Chapters Four and Five as well as justification for the methods employed. These are explained in Chapter Three.

2.2 The teaching – research nexus in the modern university

2.2.1 Classical thinking about the role of the university

If the academic community and the public in general are familiar with the idea that the university has the two major roles of research and teaching, and with the claim that excellence in the first brings about excellence in the learning experiences offered to students; this is in part because universities have long presented

themselves as adherents to an ideal first seen in the scholastic programme of the German educationalist Wilhelm von Humboldt (1767-1835):

> 'The relationship between teacher and learner is therefore completely different in higher learning from what it is in schools. At the higher level, the teacher is not there for the sake of the student, both have their justification in the service of scholarship' (Humboldt, 1810; cited in Elton, 2001: 45).

The ideals for higher education that he promulgated, uniting teacher and student in a shared search for new knowledge, belong to the formative period of the university when the pursuit of science (in the Germanic sense, see section 2.3 below) was its only goal. Brown confirms that, 'The idea that staff research is integral to student learning is one which has been deeply embedded in higher education since the reforms in the Prussian universities at the start of the nineteenth century' (Brown, 2002: 1). The emphasis on scholarship is also noted as constitutive of a certain school of approach to the functions of the university, placing the values shared in the pursuit and transmission of knowledge at the centre of academic practice.

Echoes of this agenda appear frequently in university publicity, as remarked notably by Zamorski (2002) in relation to her own institution, where claims to the quality of the learning experience enjoyed by students are grounded in evidence of academic research achievement. Although the Humboldtian university remains the spiritual model for a joining of research and teaching (Brew, 2001: 144; and see Clark (1997: 245) for the example of Justus Liebig, a scientist researching teaching in the rigorous traditions of Humboldt), it operated in very different conditions from today, with powerful researching professors setting the learning agenda for teams of subordinate researchers and students (Moses, 1990). Cardinal Newman (1801-1890) put forward his own vision of the University as a place where student teaching and learning should promote spiritual development and ignore worldly concerns for employment or scientific advancement (Newman, 1852). However, academic research may nowadays be conducted by a majority of academics in a university, itself providing for many thousands of students, and this radically changes the way funding is awarded and research is completed and experienced by participants.

What Humboldt offers as distinctive nowadays is a clear-sighted ambition for the university, unaffected by questions of mass employability, access for all, or the new knowledge economy. There is a tradition of such thought about the role of the university, with the other pole of the debate on the teaching-research nexus represented by Cardinal Newman.

The two men have in common what Luque (2002: 1) calls an 'idea-direction', that is to say, a unified vision of the spiritual movement behind the university. Indeed she considers this necessary in order that a university should be able to structure its 'mission, aim and activities' and adhere to the essential axes of a university education, i.e. that its goal is not a utilitarian end and that the ultimate spirit of the University lies outside the disciplines in a guiding ethos.

New ways of talking about knowledge with the passing of the modernist era mean that such a model of unity through the scientific method in higher education is already effectively surpassed, however much its legacy may affect the way research is conducted through a rationality of approach and quantification of data and outputs (Lyotard, 1978; Brew, 2001).

2.2.2 The university department and the teaching-research nexus

Although it is sometimes claimed that conceptually, research is a public activity and teaching a private one (Barnett, 1992; Elton, 2001) the fact that universities are largely funded with public money by attracting students to teach but encourage individual advancement of academic staff through research performance suggests that in practice, the roles are often reversed. This is in no small part due to departmental research cultures that support the view amongst staff that, say, research is mainly about objectivity or publication and teaching about successful delivery of key skills for students (Beaty and Cousin, 2002; Jenkins *et al*, 2003). Given this situation it may be said:

> No wonder research and teaching are seen to be strongly linked – to have a job at all the academic needs students to teach, and to have a job with prospects of promotion, the academic needs to research' (Brown and McCartney, 1998: 122).

This, at the departmental and individual levels, explains how research and teaching are *de facto* linked in most universities. An issue that is then central to the successful integration of teaching and research is that of university departmental organisation (Gray and Hoy, 1989; Brown and McCartney, 1998). The department is where the allocation of resources for teaching and research is made and staff roles and use of time organised (Zetter, 2002: 12).

Further, in common with Jenkins *et al*'s (2003) belief that, 'We see the research on teaching and research relations as showing the importance of the discipline in shaping that relationship' (Jenkins *et al*, 2003: 119) and with Healey (2000), who sets out the three strands of the scholarship of teaching as identified by Martin *et al* (1999) to twice include explicit reference to scholarship within the discipline, the character of the department is understood to be shaped typically by disciplinary culture and practice (Zetter, 2002).

Examples of how departments might structure their undergraduate courses to align staff research interests and students' learning experiences are given by Jenkins (2002), Jenkins *et al* (2003) and Ryder (2002), and the existence of enterprises such as Project LINK (www.brookes.ac.uk/schools/planning/LTRC/) which unites four universities in designing built environment courses and creating policies to foster the teaching-research nexus, provides a resource for departmental course teams.

An example from the geography department at University College London (UK) illustrates how the staff-student relationship may work: Students are asked to, a) do some background reading and research on a member of academic staff, b) create and administer an interview schedule to learn more about this staff member, c) produce a research-like report that puts the staff member's research in context and shows how it relates to their teaching in particular, and to geography in general (Jenkins, 2002). This example places the student alongside the member of staff and makes staff research a legitimate object of student inquiry, and it is in the vision that the academic might offer of the nature of her work that the value to students resides. She is teaching about research, and the student thus sees a locus of encounter for the two functions in the individual academic.

However, even more than at the level of the individual:

> 'Departments provide the critical interface between institutional policies and strategies, whose impact on the teaching-research nexus is no more than formative, and the programme level, where the students' teaching and learning experience is implemented' (Zetter, 2002: 12).

2.3 Academic scholarship and the teaching-research nexus

It is claimed that academic staff members who adopt a scholarly approach, where their teaching is integrated with (their) research and informed by reflection and wide subject and pedagogical knowledge, will also improve student learning experiences (Healey, 2000). The classic framework for understanding how academic scholarship appears in practice is that of the American researcher Ernest Boyer (1990) and colleagues, who propose four types of scholarship: of discovery research; of application; of integration and of teaching.

Originating in a desire to take account of the different kinds of professional activity carried out by academics and to value all aspects of their work which facilitate student learning, it is this study that underlies the contemporary debate on academic scholarship. It is clear nowadays that in practice, the scholarship of discovery is the most visible and well-recognised, both to academics assessed by the Research Assessment Exercise in the UK and to students whose views appear in previous student-centred investigations (see section 2.4). Nonetheless, this form of scholarship is called into question in that it 'is the least likely of all types of scholarship to benefit undergraduate learning' (Gibbs, 2002: 10). Boyer thought that if the scholarship of teaching was to emulate the scholarship of discovery research there needed to be comparable rigour and standards in its approach, and his work has led to demands for the evaluation and recognition of teaching performance to be rethought (Gibbs, 1995). The subject matter for this scholarship of teaching can be seen as the understanding of how learning has been achieved, followed by reflective study and application.

Scholarship is here defined as the 'new interpretation of what is already known' (Hughes and Tight, 1995: 55). Elsewhere it is defined as 'the analysis and

interpretation of existing knowledge, aimed at improving, through teaching or by other means of communication, the depth of human understanding', a reading quoted by Moses (1990) from a New Zealand Government White Paper.

The view that there is an indirect relationship between research and teaching, mediated through scholarship, has been developed in the UK over recent years by Lewis Elton. In unpacking a critical article by Ben-David (1977), Elton (1986) obtains a conceptual framework where research, teaching and scholarship stand in relation to the two main fields of academic endeavour, the sciences and the humanities. Modern universities are in principle active in the three fields of academic responsibility, but only in the humanities does scholarship underpin, or go under the name of, research. This is because scholarship itself appears differently in the sciences and the humanities. In the sciences it involves hypothetical, experimental research and in the humanities, creative reinterpretation of texts, artefacts or theories. Such work is anyway the staple of research and learning in the humanities, and so Ben-David deduces that the link between research and teaching can be made there, but has etiolated almost completely in the sciences, where the conditions of a mass university system and the complexity and distance of the contemporary research frontier do not allow an alliance of teachers and students at all levels. (Distinctions between science and the humanities have been explored extensively (Becher, 1984; Biglan, 1973) and some of the characteristics of these disciplinary areas are explored in section 2.6.)

A divorce between teaching and research in the sciences is predicted because of the comparatively low status of scholarship there. It is nonetheless scholarship that underwrites the teaching–research nexus:

> 'The way forward for universities is not to be divided into teaching institutions and research institutions, but to make sure that scholarship flourishes in them all and supports both teaching and research' (Elton, 1986: 303).

Later, a crystallisation of this position is achieved by explaining how academic scholarship, in particular through the components Elton (2001) identifies of transmission, application and integration of knowledge, can influence the student curriculum to enhance learning experiences:

> 'The conclusion that the nature of the link between research and teaching depends primarily on the process of the student curriculum, rather than on the outcomes in either research or teaching is arguably the most important insight obtained in this paper' (Elton, 2001: 49).

This is nonetheless an evolution of the Humboldtian ideal (see section 2.2), where the discovery research aspect is now 'more a natural outcome of the teaching–learning system' (Elton, 2001: 50) than in the early days of the modern university, and the changed nature of teacher-student relations in a mass education system means that the link with research is more likely to be mediated through problem–based learning than the research excellence and leadership of the teacher. Problem–based learning is here suggested as one characteristic mode of student-centred teaching informed by scholarship.

That there is a certain overlap in the terms used in conceiving the role of the university after Humboldt is seen by Elton (2002) and charged with confusing the debate. The German word commonly translated as science, *Wissenschaft*, at the centre of the 'idea-direction' (see section 2.2) that Humboldt wished for his university, is held to incorporate the notion of scholarship in addition to its normal English meaning. The point is made again by a Dutch scholar, who locates scholarship in the approach to her calling of the individual academic, of whatever discipline.

> 'There exists in Dutch, in German, in the Scandinavian languages, a word wetenschappen, Wissenschaften, Videnskaber that includes all branches of learning. In English science usually refers to the natural sciences only... we Dutchmen will emphasise the common elements in all wetenschappen: the collecting and arranging of data, the search for general principles and for relations between initially unrelated subjects, the willingness to dedicate oneself to the pursuit of objective knowledge and so on' (Casimir, 1973: 2).

On this account, scholarship is part of what it is to 'do' science, understood as composed of many branches of learning, whether the natural sciences or creative research in the humanities. The proper approach of the academic is one of a scientific (*wetenschappelijk*) nature, including a personal investment in the pursuit of knowledge (the furtherance of science), which is scholarship.

Differences in the understanding of scholarship, whether between disciplines (e.g. the 'hard' sciences and humanities) or national discourses (Casimir, 1973) affect the nature of the debate on the teaching-research nexus.

There is currently much literature clarifying how scholarship can flourish in higher education (e.g. Trigwell *et al*, 1999; Gibbs, 2002). Particularly relevant to this research is the work of Healey (2000) advising that the scholarship of teaching be grounded in the relevant disciplinary culture. Healey asserts that teaching needs still to be properly valued in higher education through being turned into a scholarly pursuit, and two of his suggested three key activities of the scholarly teacher are noted here:

- Taking account of the interplay between disciplinary research and the education of undergraduates.

- Rigorously investigating teaching and learning.

The place of the disciplines in shaping student learning experiences is also emphasized by Willis *et al* (1999) and Robertson (2001).

The scholarship of teaching, as a professional approach to student education comparable to the professional approaches demanded by research activity, calls upon exploitation of the teaching-research nexus and thus posits its development amongst academics as a central part of raising the status of teaching. It is notable too that the effects of teaching on research are rarely addressed in literature related to the nexus, but the reflective practice encouraged in scholarship permits this to happen naturally when teachers evaluate their pedagogical skills in the light of classroom experience.

In this way, scholarship is at once an essential part of what it is to be an academic, and ensures that teaching and research have occasion to meet in the undergraduate lecture room.

2.4 Developments in critical inquiries into the teaching–research nexus

Brew and Boud (1995) moved the contemporary debate forwards by analysing the teaching - research nexus as it was understood at the time and concluding that much of the previous research it was based on was flawed. The emphasis on correlation in quantitative studies was criticised and they suggested that researchers attempt 'more fine-grained studies' (Brew and Boud, 1995: 272). In looking for broader statistical trends it was felt that the research had missed important detail. Brew and Boud's (1995) own prescription was accordingly for more investigations of how academics themselves conceive the teaching - research nexus, an issue that reveals a great deal about how academics see their institutional and disciplinary role. This is investigated in section 2.6 below.

An apparent correlation was nonetheless found in the UK between TQA/ QAA (Teaching Quality Assurance/ Quality Assurance Agency) and RAE (Research Assessment Exercise) scores for UK universities at subject and department level (HEFCE, 1995; Hughes and Tight, 1995; Jenkins *et al*, 2003). Although the data seem to give some evidence for the existence of the nexus, where high research ratings at these levels sometimes occur alongside evaluations of teaching, in this case it is the likelihood of the 'halo effect' (Jenkins *et al*, 2003: 11) intervening and increasing the perceived quality of teaching in highly research-active institutions that is not accounted for. Alternatively it may have been that the top research universities were in any case better funded with more favourable teacher-student ratios after previous rounds of assessment (Elton, 2001) or that assessors of teaching used research criteria.

Challenging this by changing reward structures and recognising research and teaching not as separate pursuits but as reconcilable goals, with the possibility that undertaking one enhances the other, would go alongside a restructured student curriculum to bring out the complementarities and benefits of the teaching-research nexus. This is besides the argument of Colbeck, who investigates the ways faculty (in the US) achieve teaching and research goals. She cites studies showing how 'joint production of teaching and research can be efficient and cost effective for colleges and universities' (Colbeck 1998: 648). Once more, like Clark (1997), she regrets the fact that teaching and research are treated as discrete.

The effects of time available to academic staff are also investigated by Marsh and Hattie (forthcoming).

Further variable factors are readily to be found in academic literature (e.g. student motivation (Breen and Lindsay, 1999)), so at the least it is true to say that, 'It is now accepted that the relationship between research and teaching is multidimensional' (Elton, 2001: 46).

In the UK this theme is taken up by Gibbs (2002) who proposes three ways in which universities would be asked to show they merited research funding, all focused on the teaching responsibilities of staff and the benefits for students derived from research (Gibbs, 2002: 30). Such a system has already operated at the national level in New Zealand (Woodhouse, 1998) where universities are required to show proof of their exploitation of the teaching-research nexus.

A comprehensive review of the current state of research in higher education is offered by Brew (2001), whose theme for the discussion of teaching and research is one of 'contested space' (Brew, 2001: 145). This conclusion is based on her views that higher education must change so as to become problem-based, inquiry-focused and apt to fit its students for a 'super-complex environment' that demands the ability to interpret meanings and not take things at face-value. But this view is challenged by 'powerful competing agendas', such as traditional hierarchies in higher education. Traditionally lecturers have determined what it is good for students to study and what sort of research might take place within the discipline, but if the process of inquiry takes hold in universities as the dominant method of teaching and learning, as recommended by Clark (1997) or Elton (2001) the distinction between teacher and student will be diminished. The realisation that the learning of researchers is similar to the learning of students undermines the transmission model of teaching that some teachers are obliged, or accustomed, to practising. In uncompromising fashion, Brew refers to the 'academic apartheid' that separates academics and students (Brew, 2001: 147).

Against inquiries that emphasize the inseparability of teaching and research is the school of thought represented by Barnett (1992), who argues that the relationship between research and teaching in the university has always been one of convenience, suiting the academic community at the expense of teachers and

students. His central argument is that research is not an essential part of the process of higher education as such. To understand this it is necessary to accept some observations on the ways research has been conducted and rewarded in the UK.

Broadly, the first part of the argument is the assertion that, 'Academic excellence comes to be defined in terms of research excellence, irrespective of an academic's qualities as a teacher' (Barnett, 1992: 624). This is a critique of an ideological nature, as the set of values identified as underpinning the actual practice of research, e.g. career advancement through publication, commercial exploitation of intellectual capital and the undemocratic nature of how state research is conducted, are claimed to be inimical to the process of learning in higher education.

> 'The key point remains, however: research is seldom driven by curricular considerations but is normally given direction by an interest structure based on academic careers and the public use of knowledge' (Barnett, 1992: 623).

Subsequently, the inquiry presents six 'theses of incompatibility' between research and higher education that address flaws in the conception of the teaching – research nexus. On this conceptual level Barnett finds that there are irreconcilable differences of several sorts:

Table 2 Opposition to the integration of teaching with research in higher education

Type of opposition	**Research**	**Higher Education**
Public / Private	Public search for impersonal knowledge	Personal, subjective development of mind
Outcome / process	Deadlines, need for a finished article	Continuing developmental process
Learning as by-product / axiomatic	Researcher may or may not learn	Student learning is the goal
Bounded / Open	'Hazy' to 'precise' intellectual journey	Set world views challenged and made less certain

After Barnett (1992: 624-629)

Here Barnett nonetheless adheres to a Humboldtian line on the role of the university, stressing that higher education requires its community to engage in an unceasing mode of inquiry, as distinct from the 'closed and settled' bodies of knowledge treated in schools.

Centrally, it is argued that effective higher education can take place without research in the same topic being conducted in the same institution. This makes research activity a necessary condition of higher education, but places no demands on where or how that research is conducted. So the thesis is based on the conceptual confusion between higher education and universities that is detected in contemporary literature on the subject. The requirement that Barnett would make of teachers in higher education is that of scholarship as a professional obligation.

The author uses an analogy:

> 'The relationship of the teacher to research is analogous to the relationship of the musical soloist to the score... put this analogy into the teaching situation, where the argument often runs that the teacher in higher education should not just be doing research, but that that research should be brought into the curriculum. The musical analogy suggests that there is no general obligation of that kind; the responsibility of the teacher lies much more in having an intimate understanding of other academics' research and in being able to give an interpretation of it' (Barnett, 1992: 631).

His conclusion is that from a student perspective, whether the teachers are involved in research or not is quite irrelevant. He believes that the first responsibility of teachers is to their students, and effective teaching in higher education does not depend on the same set of skills or values as research. Further, students are above all not to be conceived as trainee researchers who need that sort of skill, but as recipients of a much broader, more personally engaging education that fits them to, 'see the difference between sense and nonsense' (Barnett 1992: 634).

Nonetheless, in a later article, the significance of 'uncertainty' in contemporary knowledge leads Barnett to argue that: 'teaching may be seen as an insertion into the process of research and not into its outcomes' (Barnett, 1997: 110).

He believes that teaching must become more like research, but not that it is about training *for* research, a distinction made because of the need to redefine roles in higher education so that all students receive the transformative education they require, not just the few who may go on to be researchers themselves.

The problem of uncertainty is resolved for Hattie and Marsh (1996) through emphasizing a deep approach to learning and the construction, not merely transmission, of knowledge. Indeed, this process is already underway, with teaching becoming ever more 'student-centred, negotiated, discursive and reflexive, [with] a move from an emphasis on teaching towards an emphasis on the facilitation of learning' (Brew, 2001: 152). Such patterns in academic life imply an increase in interest in process over outcome, and are 'consistent with new understandings of knowledge as constructed within a socio-political context' (Brew, 2001: 152).

2.5 Academics' conceptions of research and the disciplines

Research conducted into the conceptions that academics hold of research shows how varied these conceptions can be, as well as how far beliefs about research are determined by the academic discipline. The value of such research to this current project is that it is academic subject staff who act as intermediaries between the disciplines and students, and their beliefs about the teaching-research nexus might reasonably be supposed to affect how their students see research and consultancy.

The rationale behind studies of academics' conceptions of research and teaching is that there is a growing need to reconceptualise the terms of the research–teaching debate (Brew and Boud, 1995; Robertson and Bond, 2001) and to move beyond the time-worn antagonism opposing one to the other (Boyer, 1990). Such a polarity also tends to take for granted that both parties are using the same terms in the same way, but there have been shown to be differences in the way academics conceptualise teaching (Moses, 1990; Gow and Kember, 1993;) and differences in the way they conceptualise research (Brew, 1998; Colbeck, 1998). The likelihood is therefore that academics have differing understandings of the teaching–research nexus too.

One investigation of this kind comes from the work in Australian universities carried out by Neumann (1992), who reports that all 33 of the senior academic administrators she interviewed had no doubt about the existence of the nexus. Interviews with 12 heads of department conducted by Rowland (1996) revealed that some participants did not find it helpful even to distinguish between research and teaching and that no one thought staff should concentrate on one at the expense of the other.

Willis *et al* (1999) surveyed 23 members of the academic subject staff in a New Zealand university, using focus groups to draw out participants' views on the diverse set of skills involved in research. The Hattie and Marsh (1996) meta-analysis findings were used to stimulate discussion. In brief, the main points to emerge from these discussions are:

- Whether research is seen as a product or a process;
- Whether there is any place for research in the curriculum;
- Academic climate seen as hostile to the development of a teaching–research link.

Views of the type in the second point above were mostly held by staff in professional-based courses, undergraduate teachers or teachers who were not working within their specialism. Those who held the third view were reacting to an academic climate which rewards research outputs above the processes involved (Willis *et al*, 1999).

The findings of these investigations are instructive because opposition to integration of research and teaching often treats research and teaching as discrete, though potentially reconcilable, practices; whereas these initial divisions are in fact precisely what is at issue. Reminding of the need to make this conceptual leap away from seeing research and teaching as 'distinct operations that are basically opposed to each other', Clark (1997) says:

> 'But if a line must be drawn, it should be drawn between research-based teaching and learning where much blending of these three activities occurs and teaching and learning centered [*sic*] on codified material and lacking an inquiring attitude' (Clark 1997: 252).

Teaching and learning that are blended with research are more likely to happen in some disciplines than others, according to the research of Robertson (2001). A cross-disciplinary survey of New Zealand academics finds that differences in conceptions of all three terms correspond to their disciplinary cultures as identified by Biglan (1973). Here disciplinary paradigms of knowledge are known as 'hard' or 'soft' and 'pure' or 'applied'. She concludes that the culture of the disciplines has a profound effect on conceptions of teaching and research.

Student learning experiences are affected, with the 'hard' disciplines such as Chemistry and Engineering paradigmatically seeing students as potential members of the academic research community when foundational instruction is complete; and the 'soft' disciplines revising and deconstructing knowledge alongside students in an inclusive research community. This mirrors the distinction made by Willis *et al* (1999) above between research as outcome and journey.

Concerned that research performance indicators being introduced in Australian universities would disadvantage the humanities, Moses (1990) investigates how staff in four disciplinary areas conceive scholarship, teaching, research and their inter-relation.

Drawing on Biglan (1973) and Moses (1990) the table below summarises the key differences in academics' conceptions of the terms of this debate in relation to discipline:

Table 2.2 *Expected beliefs about research, teaching and scholarship in the disciplines*

	Paradigm, after Biglan (1973)	View of teaching	View of research	Teaching-research nexus	Scholarship
Chemistry	Hard-pure	Content-orientated	Collaborative, like Brew's 'trading variation' (Brew, 2001)	Yes, through scholarship and interaction	Important, particularly for research
Engineering	Hard-applied	Not enjoyed as much as research	Essential; more a separate activity	Link thought to exist	Less evident
English	Soft-pure	Central but too much of it	Necessarily scholarly	Research geared to teaching	Located in teaching
Law	Soft-applied	Central. Need to be up-to-date in content	Follows teaching	Research may hamper teaching	In attention to teaching

Adapted from Moses (1990: 359)

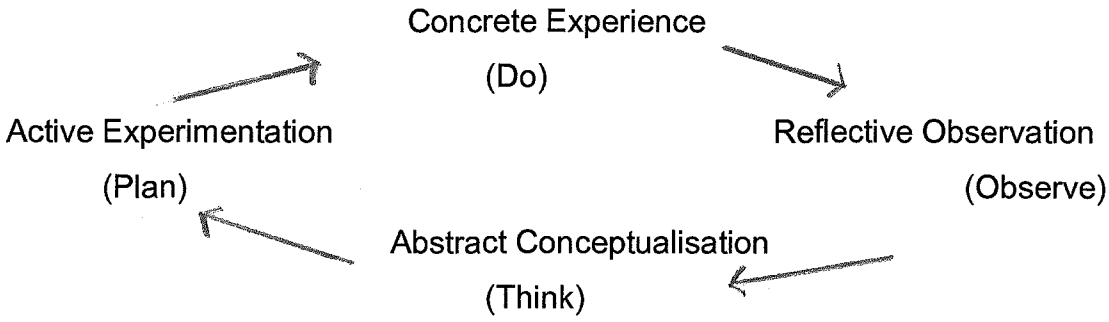
Here, the possible effects on students in these fields are displayed, with the essential distinction coming between the 'soft' disciplines' professional approaches which have student teaching at the very centre and those 'hard' disciplines which make teaching the means of delivery of the products of research carried out in the academic community.

2.6 The relevance of Kolb's Experiential Learning Theory (1984)

The division that is operated in this investigation's data analysis between disciplinary groupings of students is partly justified by theories about the way students learn and what sort of teaching and learning takes place in different disciplinary areas.

Kolb's Experiential Learning Theory is based on the learning cycle he proposes, where all four stages are essential to learning taking place:

Figure 2 Kolb's Learning Cycle (1984)



Adapted from Healey and Jenkins (2000: 187)

If the learner starts by actively experiencing an activity, she is then required to reflect on that experience and arrive at a model that explains what happened during active experience, or to elaborate a theory to be tested during the next stage of concrete experience. Before this however comes active experimentation, where the learner sets up the next experiment (as concrete experience).

Students have different learning styles and tend to prefer certain aspects of this cycle to others accordingly. The value of these observations here is that student learning styles can be seen to follow disciplinary areas, mirroring the way that staff conceptions of research can be mapped onto a disciplinary framework (see 2.6 above). For the purposes of this investigation, where the two groups of students most under analysis are those from the Business School (including Management, Mathematics and Computing students) and those from Leisure, Sport, Hospitality and Tourism, the corresponding qualities are that:

- Business students learn when allowed to gain hands-on experience;
- Mathematics students learn when working with logical theories;
- Computing students learn when applying practically concepts and theories;
- Leisure, Tourism, Hospitality and Sport students learn when applying practically concepts and theories.

Adapted from Healey and Jenkins (2000: 189)

Furthermore, where students follow these stages of the cycle it can be seen that they are engaged in the same process as scholarly academics who reassess frequently their own teaching and research practices.

2.7 Student-centred research into the teaching–research nexus

The past decade has seen the literature on the teaching - research nexus develop and diversify in a way that owes a great deal to the work of Neumann (1992 & 1994), Brew & Boud (1995) and, subsequently, Colbeck (1998), Jenkins *et al* (1998), Willis & Harper (1999), Brew (2001) and Lindsay *et al* (2002).

These authors have been instrumental in transforming the conceptual approach to the question of the teaching-research nexus, which for many years was treated as a search for correlations amongst data on the outputs of time spent on research and teaching (Centra 1983; Webster, 1985; Volkwein & Carbone, 1991; Ramsden and Moses, 1992).

Much of this quantitative research comes from the United States, including the two influential meta-analyses of preceding studies by Feldman (1987) and Hattie and Marsh (1996) that show no positive correlations between research productivity and teaching ratings.

Jenkins *et al* (2003: 10–13) provide a descriptive summary of the available statistical evidence, noting amongst other conclusions that the focus of the majority of these investigations has been the individual academic.

The point of departure for this discussion is the shift that has recently taken place towards student-centred approaches to research into the nexus. Neumann (1994) was amongst the first to recognise that the student experience was missing from the literature. She felt that this requirement could best be met by moving on from previous quantitative research methods in favour of a project that solicited and analysed students' views in depth. Her own student-centred research takes into account the views of 28 students from a number of disciplines and at all levels of study. Her project took place in a research-orientated institution, and was motivated by the view that:

> 'Given that students are the recipients of university teaching and that arguments in favour of a nexus claim the benefits to teaching of academic research, students are a most important group to consider in examinations of the teaching – research nexus' (Neumann, 1994: 324).

The findings of Neumann's (1994) study may be summarised as follows:

- Benefits to students of staff research and consultancy include: up-to-dateness of courses, enthusiastic staff, insights into staff as people.

- The major drawback comes when students feel staff research interests distort the content of their course. They are keen that course aims should be adhered to. Good teaching practice is vital, whether staff have up-to-date knowledge and enthusiasm or not.

- There are disciplinary influences on students' understandings of research.

- Motivation and level of study also influence students' views on research and teaching. Generally, more advanced students were more aware of possible connections.

These findings went on to inform the first study of the kind located in the UK, conducted by Jenkins *et al* (1998). This study investigated the views of undergraduate students only, sorting them by subject group and level of study (Level I or Level III). The emphasis on disciplinary grouping follows Neumann's findings above as well as related research (Elton, 1986; Feldman, 1987). The findings of the Jenkins study confirm and develop Neumann's results and provide a base for the research questions asked in Section One here.

The first important finding is the 'bottom line requirement' (Jenkins *et al*, 1998: 131) of students for high quality teaching. The research found that students valued this uniformly across disciplines and year of study even as attitudes to research varied with these factors. However, one component of this high quality teaching was frequently expressed as the need for lecturers to be up-to-date, and it was seen as vital that this be more than textbook knowledge.

In addition to requiring high quality teaching, students often held beliefs about the practice of research by staff that accord with their disciplinary standards. It is noteworthy that:

- Business management students see research as 'real-life know-how'.
- Planning students are concerned that staff should have up-to-date knowledge of legislation, because this is the knowledge that obtains in their field.

The study also finds that students perceive a number of benefits in staff research. Their conception of this research tends to be one that emphasises the adding to the stock of knowledge (Boyer's (1990) Discovery Research) that staff may participate in. The main benefits they identify are:

- Up-to-dateness of their teaching (Jenkins *et al* associate this with being scholarly);
- Impacts on the enthusiasm of the lecturer and in turn, motivation for students;
- Credibility for individual staff and the department;
- Academic support during the dissertation period;
- Better understanding of academic staff as people and learners.

Students also identify disadvantages to them from staff research. These are:

- Where staff are not available to students.
- Where staff are more interested in research than teaching.
- Where staff research distorts the curriculum.
- Where students do not feel that they are stakeholders in the research.

The underlying finding in all the above points, supporting the claim that the student voice is a valuable addition to the literature, is that the students do perceive that there is a teaching–research nexus. Positive and negative features of this nexus are identified by students. However, the study also reveals how often students feel that research has nothing to do with them, and Jenkins *et al* (1998: 136) here coin the term 'stakeholders' to describe how students imagine they might play a bigger role. Here too is a major justification for consulting the student body:

> 'Given that students are increasingly aware of the costs of their university education and expect universities to meet their needs, there are policy implications for institutions and departments to draw from this research' (Jenkins *et al*, 1998: 136).

These policy implications are addressed in relation to the current research project in Chapter Six.

A related research project (Lindsay *et al*, 2002) focused on the views of postgraduate students in order to build on the Jenkins *et al* (1998) study. This was at once a gap in the literature and a reaction to contemporary changes in the composition of the student body.

> 'Over the past two decades, one of the main developments in higher education worldwide has been the growth of postgraduate studies' (Lindsay *et al*, 2002: 4).

This study's findings are recognisable from those seen previously, save in particular for an insight into how postgraduates in particular evaluate the instruction they are given, namely, that they commend *salience* in their academic subject staff's research activities. The authors remark on the complementarity of the two investigations while noting too that it is particularly undergraduates who feel excluded from staff research, and that postgraduates feel more positively about it as the amount (numerous measures used) undertaken in their department increases (Lindsay *et al*, 2002).

The inverse holds for undergraduates, suggesting perhaps that staff involvement in research is in some way better communicated to postgraduates then to undergraduates, or that postgraduates are better able to make use of it. This

finding underpins the question posed by this current inquiry about differences in study level.

A fourth student-based investigation, like that of Neumann (1994) based overseas, also examines how the teaching–research nexus impacts specifically on postgraduate learning. The investigation proceeded through a questionnaire with 950 responses and a follow-up focus group. Comparing students from hard science and Business backgrounds, Willis and Harper (2000) find that:

- Students indicate a high level of awareness of staff research;

- Students in the School of Business are less aware of and less affected by the research activities of their subject staff than students from the science fields surveyed;

- Students thought that research generally had positive effects on teaching. More science students thought this than students from the School of Business;

- More science students felt that their understanding of relevant current research had been improved by staff research activities than School of Business students;

- The most often cited benefit to students of staff research is increased enthusiasm for the subject;

- There is evidence of greater understanding of methodological issues and the research process as a result of staff research. This is higher amongst science students than in the School of Business. However, students from the School of Business felt their research-related skills had undergone more development than did science students.

- Major effects on course content were the use of examples from research in lectures and improved knowledge of the lecturer. 'Expert knowledge' is suggested more by science students than by those form the School of

Business. However more School of Business students recognise the inclusion of reading material from staff research into their courses.

The authors draw out particularly from these features the motivation that exposure to staff research is likely to foster amongst postgraduate students. They also point to how students see the benefits of staff research on processes such as teaching, but more importantly on outcomes, like exams and diplomas.

The research drawn upon here had been developed from the investigations reported the previous year into postgraduate student awareness and experience of staff research (Willis *et al*, 1999). Here they concluded that, 'There was almost no evidence that students had any awareness of research as a process of finding new knowledge or that those who taught them possessed such skills that could be passed on' (Willis *et al*, 1999: 5).

In effect, use of the term 'research' was causing problems, but when related closely to their courses, the postgraduates had shown awareness of how staff research might be integrated:

- Staff publications in the reading lists (the most frequently cited measure of integration);
- Research or research techniques mentioned in lectures; also by guest lecturers;
- Up-to-dateness and personal experience;
- Critical analysis and scholarship.

Importantly, it is seen again that some of these students had no knowledge whatever of staff research, claiming that it had no impact at all. Others felt that it was best kept away from the classroom, where it serves principally as a distraction. This finding, seen also in the work of Jenkins *et al* (1998), indicates a problem at the heart of the teaching–research nexus. If research is taking place in the university without touching upon the learning experiences of (some of) the students then there is a *prima facie* argument for at least making clear to them the ways in which research is commissioned and carried out by those also responsible for their teaching. After all, students pay for a learning experience which is offered

by institutions whose secondary focus, that of research and consultancy, can be privileged above teaching.

Another student-centred investigation that sheds light on undergraduate awareness of and participation in (staff) research is that reported on by Zamorski (2002). Her main focus is what students understand by *research-led teaching* (see Chapter One).

She observes that universities often base their claims to excellence on 'research excellence and the benefits this accrues to potential students' (Zamorski, 2002: 412) and this familiar formulation is the motivation for her investigation. The main findings as they relate specifically to student learning experiences are:

- Understanding of 'research-led' teaching varies according to individual and by School;

- Incorporation of current or 'cutting edge' research into classes is expected by students;

- Students make a big distinction between 'real' or 'proper' research and consultancy-style activities or their own research work;

- Students feel strongly that research activity has a central place in the university 'ethos' but it is chiefly 'noticed by its absence rather than its presence' (Zamorski, 2002: 417).

- There is a high level of alienation from research processes evident and some students report no involvement at all.

The Zamorski inquiry derives a model of teacher–student relations from the student data. The 'apprenticeship model' (Zamorski, 2000: 16), though incidental to her main argument, places the student as assistant in and observer of staff research, and is supported by Zamorski's finding that a degree of contact with research-in-process is seen by students as doing 'real university work'. This will become important in Chapter Six.

This distinction between real and other forms of research is applied also to the academics who perform it, creating a hierarchy of expectation amongst students. 'Real' research is theoretical in nature and 'real' academics people who have spent all their lives in higher education immersed in theory. This model does not, of course, apply to all student accounts of their expectations of research and researchers, but the overall sense of their understanding of research in the curriculum as reported by Zamorski (2002) is that:

> 'Overall, research, even in the third year, was still conceived of as an esoteric activity, and whatever research experience or work undergraduates undertook, it was not usually regarded as 'proper' research' (Zamorski, 2002: 419).

Once more, some students in the study report that they do no research at all and many that during their main period of contact with research, the dissertation, there was not sufficient guidance or preparation to allow them to profit from it fully. Participation of students in research, but more broadly, in university life, is highlighted as a key factor in understanding the new 'client / service relationship' between the student and the university. The use of student evaluations (as used by many quantitative research studies) in research about their learning experiences is criticized:

> 'For students to provide customer satisfaction measures is not to be confused with participation' (Zamorski, 2000: 9)

The question of how such participation comes about moves the narrative on from seeing the student as the object of teaching to a conceptual inquiry seeking to understand the processes involved in teaching and research and to relate them to student learning.

Table 2.3 Previous student-centred investigations into teaching and research

Author and characteristics of study **Does the article mention...?**	**Neumann 1994 Interviews with 28 undergrad and doctoral students in Australian Unis**	**Jenkins *et al* 1998 Undergrads; range of disciplines in one institution, UK**	**Willis *et al* 2000 Range of postgraduates in student questionnaire, NZ**	**Zamorski 2000 Undergrads researching into their own and peers' learning experiences, UK**	**Lindsay *et al* 2002 Taught postgrads; 8 disciplines, focus groups, UK**
Student requirements					
□ High quality teaching	Yes	Yes	Yes	Yes	Improved learning
□ Relevance/ salience of staff research to course					Yes
Passive ways in which students see r/c					
□ Staff publications			Yes	Yes	
□ Hear it discussed in lectures			Yes		
□ Exposure to research techniques			Yes	Yes	
□ Guest lecturers			Yes		
Active				Yes	
□ Project work/ fieldwork			Yes		
□ Involvement in staff research					
Benefits of staff research					
	Yes	Yes	Yes		Yes
□ Up-to-dateness of knowledge	Yes	Yes	Yes	Yes	Yes
□ Enthusiasm of lecturers/ tutors		Yes	Yes	Yes	Yes
□ Staff or Uni gain credibility		Yes	Yes		Yes
□ Helpful for dissertation	Yes			Yes	Yes
□ Course content		Yes	Yes	Yes	
□ Insight into staff members		Yes			
□ Scholarly staff					
Disbenefits of staff research					
□ Lack of availability of staff		Yes		Yes	Yes
□ Staff preferring research to teaching		Yes	Yes	Yes	Yes
□ Research skewing the curriculum	Yes	Yes		Yes	Yes
Students as stakeholders		Yes		Yes	Yes
Disciplinary differences	Yes	Yes	Yes	Yes	

2.8 Summary of chapter

This chapter has presented and analysed the key academic literature that has influenced thinking about the teaching-research nexus. Starting with the broader question of what the university is for, the analysis leads quickly into a consideration of the place of scholarship, both in defining the university and supporting the integration of teaching and research. Subsequently the immediate precursors of this present investigation are summarised, with their student-centred rationale and findings described. The growth in interest in such studies is then explained through an exploration of the flaws in earlier statistical research, and developments in thought about how the processes involved in teaching and research in higher education might need further investigation are presented.

The chapter looked at work carried out in Australia, New Zealand and elsewhere over the last decade and a half that reports on academics' conceptions of teaching, research and their potential integration and relates this briefly to Kolb's (1984) Experiential Learning Theory.

In conclusion, the current trend is towards an understanding of teaching and research as being linked under certain conditions, where the ideal focus of the curriculum is inquiry through problem-based learning and the academic community is reconceptualised so as to develop learning partnerships between academic staff and students. Disciplinary differences are emphasized by most scholars as the largest factor in determining academics' and students' views of research and teaching. Finally, both as the vehicle of mediating factors in the relationship between research and teaching and as a key understanding about research held by academic staff, the nature of research as product or process is brought to the fore by contemporary inquiries.

3.1 Introduction

This chapter will ground the methods of this small-scale project in a tradition of inquiry that puts the experience of its human participants at the centre of the research design. By setting out and justifying the assumptions that underlie the choice of methodology the validity, reliability and representativeness of the research are put into context. The chapter then goes on to explain how the results set out in Chapters Four and Five were obtained.

3.2 Philosophy of the research

3.2.1 Theory informing choice of methods

The fundamental belief that informs this investigation is that, 'in qualitative research one explores the realities of everyday lives as they are experienced and explained by the people who live them' (Burgess *et al*, 1988; p.310). This social constructivist position (where people 'use symbols to interpret one another and assign meaning to perceptions and experiences' (Johnson 1995: 203)) fits with Brew's (2001) broader reaching definition of research as 'a systematic process of developing our knowledge of the world and our relationship to it' (Brew, 2001: 64).

In this goal the research uses the method of small group discussions to provide rich, meaningful and inter-subjectively experienced qualitative data. This data is linked to the quantitatively evaluated student experience questionnaire that precedes it. The data collection is a two-stage process, where the mixing (or triangulation) of methods has the benefit of providing different fixes on the reality under investigation (McNeill, 1985). This means that the approach is part of the post-positivist canon of methodologies which have grown up in the social sciences over the last forty years.

There is no assumption that any sort of truth exists about students' understanding or experience, merely that it is possible and desirable to get close to the reality of

their learning experiences. It is recognised that the best way of attaining this proximity to others' lived reality is to read off from 'multiple errorful sources' (Trochim, 2002), and that such an approach may claim objectivity for its findings only with certain reservations (see section 3.5).

No individual participant or researcher has access to objectivity in social research since objectivity is understood precisely as a social phenomenon, constructed by communities of investigators and actors, and valid as theory until it no longer serves to describe reality as lived. Such an approach to epistemology belongs to the school of phenomenological sociology, as pioneered by Alfred Schutz (1967) in the sixties.

The rejection of research methods seeking detached observations and external truths in favour of analysis of individuals and the systems they invest with meaning can be traced back to Max Weber (1904). He propounded the practice of empathy with the human subjects of research as the only way to understand how they give meaning to their life experiences (Johnson, 1995). The research questions of this study aim precisely at this sort of understanding. If such understanding of the human subjects of research is possible then the validity of the results obtained depends on the extent to which they translate authentic experience.

One of Brew's (2001) variations in academic conceptualisations of the practice of research is appropriate here. She refers to the *layer variation* as presenting reality as a surface concealing 'phenomena, descriptions, explanations and meaning' Brew (2001: 25). This does not necessarily imply that there is a correct explanation to be discovered, rather that it is worth seeking a better one than already exists. This explains well the guiding spirit behind this present investigation, whether we take the 'surface' to be the large number of inconclusive figures produced by the statistical inquiries favoured until recently or the data gathered by this more contemporary mixed-method approach. In the first case a new methodology is now being used to look under the surface for clarification and hypothesis-forming and in the second the data obtained from these methods is itself subjected to repeated analysis and then added to the field as part of a new narrative in social constructivism.

In discussing the association of paradigms (the sets of assumptions governing what sorts of questions are asked) and methods in research, Fetterman (1988) sets the question of choice of methods in a larger context:

> 'Methods are manifestations of a manifold religion we call science' (Fetterman 1988: 18).

This religion has large followings, culturally divided as qualitative or quantitative researchers, but sharing the same core value of truth. It is not in fact over the usefulness of methods that researchers might find their fundamental disagreements, but over the philosophical and epistemological foundations of the research that employs them. In other words, a scientist who has invested many years in laboratory work may naturally wish to apply similar research methods to the social world as he does to the natural world. Qualitative research of the sort involving interview or other soft data may not satisfy epistemologically his professional commitment to truth, but the social scientist takes the view that,

> 'Our decisions about what level of precision is appropriate to any particular claim should depend on the nature of what we are trying to describe, on the likely accuracy of our descriptions, on our purposes, and on the resources available to us; not on an ideological commitment to one methodological paradigm or another' (Hammersley, 1992: 163).

Given that this research is interested in students' personal learning experiences, and that the descriptions arrived at in Chapters Four and Five are intended to be illustrative of a fairly small but varied group of participants, a mixed-method approach favouring depth over statistical accuracy is appropriate. The purposes of the research, as set out in the research questions (see Chapter One) are to build on previous student-centred studies and add to a growing body of literature seeking to examine the teaching-research nexus from a previously neglected point of view. To that extent the choice of methods is also determined by the need to have data comparable to, and arrived at similarly to, the text data generated in these studies.

3.2.2 *Use of interview data*

Silverman (1993) describes data from research interviews in comparison with data obtained from naturally occurring occasions:

> 'Despite the power of naturally occurring data it does not follow that it is illegitimate to carry out research interviews. Everything depends on the status which we accord to the data gathered in such interviews' (Silverman, 1993: 106).

The status of the data gathered through the small group interviews in this present research might for example be read as potentially true accounts of how students have awareness and understanding of research and consultancy. This reading of interview data is positivistic in that it places the researcher as external to a discoverable truth, even if that truth is not expressible statistically.

Alternatively it might be argued that the relationship between interviewer and interviewees in even a loosely bounded social situation is expressed through sequences of sense-making procedures and standard practices for group conversation on the part of those concerned. This is the point of view of ethnomethodology which seeks to discover the means by which people impose and operate rules in their social interactions. An analysis of this sort would look for the way participants are able to apply a common-sense knowledge of social structures to their interactions with the researcher and each other and thus the structure of the interview itself is treated as the object of analysis.

Table 3 Three approaches to gathering social data

Approach	Type of knowledge	Claim to reliability	Shortcomings
Positivist	Facts, beliefs	Can be repeated	More seems to be missed than is captured in the data, validity in some social science research
Interactionist	Authentic experiences	Intersubjective depth	Naivety in failing to see how accounts are conditioned by situation (common sense)
Ethnomethodology	Cultural understanding	Complete immersion in and understanding of the subject	'Naturalism' allows weak claims to validity: only understanding others' experiences

Adapted from Silverman, 1993: 98

The approach adopted here is that the interview data are at once illustrative of the findings of the student experience questionnaire, and themselves potentially valuable as sources of information. Their truth-content is not supposed to be verifiably distinct from the group reality in which they were formed: indeed the nature of the research questions makes it unlikely that some students would have been able to provide the responses they did without group interaction. This is returned to in section 3.6.1.

Broadly, the value of the methods employed here is judged in terms of their suitability for the research questions asked by the inquiry (see Chapter One). The goodness of fit of these methods to the research questions is what provides the conclusions with their validity. There is nothing inherently naturalistic or positivistic about methods (Guba & Lincoln, 1988) and it will be shown that those used in this investigation are not justified by their coherence with a broad qualitative or quantitative philosophy but by their correspondence to an established

methodology in the field and to the wider task of interpreting faithfully human experience.

3.3 How research in the field has been conducted so far

This philosophy is shared by the greater part of the recent body of research published in the field of the teaching–research nexus. For example, Lindsay *et al* (2002) claim that their methodology 'shows how qualitative and quantitative analyses can be mutually illuminating and supportive' (Lindsay *et al* 2002: 11). Jenkins *et al* (1998) use focus group discussions in a larger-scale project and the questionnaire method (rather than student evaluation of teaching) is used by Willis *et al* (1999). Zamorski (2000) reports that her mixed-method approach, though more varied and spread across two months, 'tested a model of student learning which was particularly distinctive in that it invited students to become integral to the whole process of research' (Zamorski, 2000: 5).

For a long time researchers who were interested in the potential effects of the teaching–research nexus in higher education sought proof of its existence through statistical analyses of measurable phenomena. The objective was to ascertain whether increases in variable *x* in one activity would lead to concomitant changes in variable *y* in the other.

Most studies compared teaching effectiveness with research productivity by finding a suitable measure for each (e.g. Linsky and Straus, 1975; Centra, 1983; Kremer, 1990; Ramsden & Moses, 1992; Terenzini and Pascarella, 1994). Typically, teaching effectiveness would be represented by student evaluations and research productivity by a proxy such as publication count, number of citations for each academic, number of memberships of a research society and so on. Results from these studies are varied but generally inconclusive. Some examples follow: Baird (1980) found that there was a disciplinary influence on the teaching-research nexus, with graduate students in a psychology department rating highest those teachers who had published widely, in contrast to the other disciplinary fields he surveyed. Centra (1983) supports this with his findings that social science academics 'were the only group for which there were consistent significant relationships between the number of published articles and student ratings of

instructor effectiveness or course value' (Centra, 1983: 386). Another study suggests that research-active teachers are more available to students, give better feedback and return students' work faster (Friedrich & Michalak, 1983).

In the face of the lack of evidence from such investigations, a degree of caution is needed when summarising their importance. This is expressed by the authors of one such study:

> 'The findings are based on studies of association, rather than of functional mechanisms, and therefore cannot reveal the existence of a sequence of cause and effect... the present evidence in no way refutes the proposition that the continuing study of and intellectual curiosity about a subject is necessary for effective teaching. Our results indicate that the simple model of more research, therefore better teaching, is suspect' (Ramsden and Moses, 1992: 292-93).

Findings such as the above gave rise to interpretations of possible models of relationship between research and teaching, and these are summarised by Hattie and Marsh (1996: 508-518). Briefly, the models consider variables such as time, personality, institutional rewards and underlying academic abilities that might enhance both functions. All these models offer plausible mediating factors, but are situated at the level of the individual academic or the institution, and no input is sought from the student. In short, one major justification for linking teaching and research: that student learning can be enhanced; is only indirectly tested.

One published study, Volkwein and Carbone (1994) abandons the unidimensional method centred on staff performance and extends a range of measures to test the departmental research climates in an American university and to relate these to a variety of measures of student growth and satisfaction. It may be noted that whilst no appeal is made to the value of student learning experiences as articulated by the students themselves, the study claims success for its variety of self-reported measures of student growth.

Nonetheless, this current research starts from the point where Hattie and Marsh conclude: 'the common belief that research and teaching are inextricably intertwined is an enduring myth. At best research and teaching are very loosely coupled' (Hattie and Marsh, 1996: 529). One can agree with this proposition and believe with Brew and Boud that, 'teaching and research are correlated where they

are co-related, i.e. when what is being related are two aspects of the same activity: learning' (Brew and Boud, 1995: 270),a notion that expands the terms of inquiry from products to processes.

The point is that some research activities involved in, say, writing for publication may not be of at all the same sort as those involved in effective teaching. Indeed, as Elton (1986) says of the previous approach:

> 'It assumes that the research and teaching capabilities of an academic can be rated, each on a single dimension, which seems intrinsically improbable for such complicated human activities' (Elton, 1986: 300).

Certainly, that is what the findings of studies such as Feldman (1987) and Hattie and Marsh (1996) suggest, particularly in the light of research evidence reporting that many staff feel strongly that there is a teaching–research link (Jensen, 1998; Halsey, 1992; Neumann 1992; Colbeck, 1998). Similarly, Friedrich and Michalak (1983) had already called into question the simplicity of the correlative measures used when proposing an Intervening Variables Model.

So it is a question of what the research methodology should take as its object; what are the data that it is looking for. Here the shift from numerically based methods to the interpretive style favoured here and elsewhere finds its justification. It is not a question of rejecting quantitative methodology or not believing that research and teaching outputs have any significance to students. It is a matter of hypothesising that what is similar in academic research and academic teaching is the *learning* that must take place (Rowland 1996, Clark, 1997), based in part on the relative failure of previous methods to show that any *outputs* are obviously correlated, but more relevantly, on the search for suitable *processes* that might explain why academics feel so powerfully that there is a valuable relationship at work. Seeking these processes leads naturally to considering students' experiences, since their learning is the goal of higher education.

This methodological turning point is expressed by Elton (2001) as follows:

> 'The specific position that will be arrived at is that a positive research and teaching link primarily depends on the nature of students' learning experiences, resulting from appropriate teaching and learning processes, rather than on particular inputs or outcomes' (Elton, 2001: 43).

The search for these processes has led researchers finally to consider the population who receive the benefits or disbenefits of the teaching – research nexus, the students themselves. Beyond evaluating their teachers' abilities at the end of the course of study, what did this group have to contribute, and how could it be discovered?

Research studies that have chosen methods from the interpretivist theoretical perspective (looking at the way people use symbols to convey meaning) include those of Neumann (1994), Jenkins *et al* (1998), Willis *et al* (2000), Zamorski (2000) and Lindsay *et al* (2002).

With a corresponding social constructivist epistemology (i.e. the 'truth' under investigation is that built by the members of a particular social group, here, students) and a methodology that favours gathering plenty of rich, largely non-numerical data, the shared aim of these projects has been the elucidation of the student learning experience in relation to research.

This focus on students' views leads also to an interactionist theoretical perspective. Understanding of how others convey meanings to each other cannot be achieved without some sense of how they interpret subjectively their own behaviour.

Finally, with student-centred research into the relationship between teaching and research taking place in several institutions worldwide, it was felt valuable to align the research design with that of recent successful investigations, so that, for example,

> 'The results we have reported demonstrate the value of a methodology which directly asks students to present their experience instead of using correlations to support inferences about the effects of lecturer research' (Lindsay *et al*, 2002: 10).

3.4 Data collection methods

3.4.1 Student experience questionnaire

The student experience questionnaire asks respondents to think about the effects of research and consultancy that they are familiar with, and solicits their opinions on the integration of these activities with teaching [see Appendix 2].

The questionnaire is divided into seven principal question sections, with a further final section for respondents to give their course and route of study, age and gender. The seven main sections all treat potential student understandings and experiences of research and consultancy in the University. This is done for questions 1.1, 1.2, 1.4, 1.5 and 1.6 by asking respondents to tick statements that they recognise or agree with, with respondents having the option to tick as many statements per question as they wish.

Question 1.3 directs respondents to circle a figure representing their estimation of the percentage of research-active staff they have encountered during their course. As well as returning valuable data on student beliefs about their subject staff this question filters out those with no awareness by directing them to leave questions 1.4 to 1.6.

Question 1.7 develops the theme of attitudes to staff research/ consultancy through a series of statements tested on a Likert scale. This question asks all respondents to quantify their feelings towards certain statements about their learning experiences as they relate to research or consultancy. It is felt that this method supplies useful raw data to help develop a hypothesis about disciplinary and study-level differences in student learning experiences.

Finally, two opportunities are offered for respondents to write about their learning experiences: once in response to an open question about the positive effects of subject staff research/ consultancy they had experienced, and once in order to add any other comments related to the overall issue. These questions allow respondents to offer potentially valuable information outside of the constraints of the closed statement format elsewhere in the survey. It was also hoped that they would offer textual data to add to the stock of working hypotheses about what

students' general awareness and understanding of research and consultancy might be. These hypotheses informed the second stage of the data collection: the formulation of a discussion schedule for the small group discussions.

3.4.2 Quantitative data collection

Data collection took place between February and June 2002. The student experience questionnaire was available online for exactly one month during February and March and the numbers of students responding was monitored daily. The questionnaire was available online only, as it was felt that this gave all members of the sample population the same chance of replying (as all had student accounts with the University). All Level III undergraduate and taught postgraduate students were contacted by email and invited to participate. The link from email notification to the questionnaire web page was simple to use and students were given the incentive of £20 Amazon.co.uk vouchers for five respondents to be drawn at random when the data gathering was complete. In addition there was poster advertising for the questionnaire on all three university campuses.

When the questionnaire was taken offline the number of responses was not felt to be sufficient (approx. 80), and so a follow-up period of data collection was undertaken. All Level III and taught postgraduate lecturers were contacted via email and asked to allow the distribution of paper questionnaires in their classes. This took place over the next two months, according to availability of staff, of whom around a dozen agreed to oversee the completion of the questionnaire. At the end of this period there were 199 returned questionnaires in total. One was removed as a duplicated electronic return and two paper copy returns were disqualified because the respondents had not attempted any of the questions. The total number of valid questionnaire returns is thus 196.

With a total potential sample population of over 2,500 the response rate is small, at around 8%. This is thought to be due to the data collection method, as relatively few students make use of their University email accounts. Many commercial alternatives exist and are preferred by students (none of the small-group discussion group participants had read the email of notification sent in February). Although this is a weakness in the research design, the final total of around 200

responses offers a varied and multi-disciplinary picture of students at the University.

At this time, in accordance with the commitment made to students in the email notification, the prize draw took place, and the gift vouchers were distributed.

3.4.3 Small group discussions

Uses of small discussion groups include drawing upon 'respondents' attitudes, beliefs, experiences and reactions' (Gibbs, 1997: 1), or 'obtaining general background information about a topic of interest' (Stewart and Shamdasani, 1990: 15). The advantages of this method for the research are that open questioning in a semi-structured discussion schedule encourages active reflection on the part of students and gives them the chance to develop their thoughts throughout the sequence of discussion topics. Krueger (1998) defines the ideal conditions of such a group as 'a carefully planned discussion designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment '(Krueger, 1998:18). The main purpose of such a method is to draw upon participants' attitudes, feelings, beliefs and experiences in a way which would not be feasible using other methods, such as observation, or one-to-one interviewing.

The proximity of this method to focus group research is important but it was felt that obtaining dense data from a small group, encouraged to discuss with each other, was of more value than trying to replicate larger focus groups common in larger-scale projects. This was a practical concern too: the discussions were to take place during the busy weeks of the Level III dissertation period. Indeed, securing attendance of participants for the small-discussion groups proved extremely difficult, and an obstacle to obtaining the amount of data initially sought.

It was thought that by this time Level III discussion group participants would have experienced what the questionnaire survey had suggested was the most recognised form of contact with research in the student experience: the dissertation. The survey was active at the beginning of the dissertation semester so that it was likely respondents were beginning rapidly to gain in substantive experience at the same time as the small group discussions were scheduled.

The small group discussions also had the important benefit to this research of being based on 'interaction within the group based on topics that are supplied by the researcher' (Morgan, 1997: 12). This was felt to be useful since students are not typically expected to have knowledge of their lecturers' departmental or research commitments (Brew, 2001). Similarly, referring to student evaluations of teaching, the head of the New Zealand unit charged with investigating whether universities maintain a research-teaching link remarks that:

> 'Students cannot reliably report on whether their teaching is being informed by research' (Woodhouse, 1998: 48).

Thus this investigation finds itself challenging that belief through the means of group interviewing.

Finally, in building on the student experience questionnaire, it was seen as valuable that as a series of once-only groups, each provided a forum where 'people can share and test out their views with others rather than responding in an isolated interview' (Burgess *et al*, 1988: 309).

The topics of discussion (see appendix) for the hour-long groups were drafted several times and piloted in order to build on and explore in greater depth the issues that arose from a preliminary analysis of the electronic questionnaire survey. The topics were sequenced logically, moving from broader educational topics affecting student life to targeted key research questions within an informal sounding structure (Stewart and Shamdasani, 1990). Participants were asked directly about examples of research and consultancy that they had experienced. The role of the researcher was to provide the topics for discussion and to guide participants where necessary to ensure they respond to the issues at hand. It is besides one of the features of such facilitation that it leads to 'stimulating new ideas and creative concepts' (Stewart and Shamdasani, 1990: 16).

Selection of participants for the discussion groups was based on replies to the electronic questionnaire survey, ensuring that participants had some prior familiarity with the research topic. Finally, participants were drawn from both undergraduate Level III and the taught postgraduate population and mixed

according to availability. The sample thus obtained (see appendix) had members from several schools, both study-levels and a representative mix of male and female students.

The small-discussion groups were recorded onto cassette for later transcription. It was expected that the experience of leading such a session would help the researcher become more effective as a facilitator in subsequent groups, and to this end transcription took place concurrently with the series of sessions.

3.4.4 Setting up and facilitating the small group discussions

A pilot group of three students was arranged and a small discussion group undertaken at the end of April. This showed that the questions elicited the required kind of reflection from the participants. On the other hand confusion about what sort of discourse to adopt arose from a lack of clarity in the facilitator's directions. Combining students from Theology, Computing and Tourism, this group was helpful in gauging how to conduct subsequent groups with appropriate interventions and simple topics of discussion that kept misunderstandings to a minimum.

The small group discussions took place in May and June. Initially, only those students who had replied to the online questionnaire were contacted. It was hoped that this would allow those who had contributed to the figures to develop further their beliefs. However, problems with response rates led to this approach being dropped in favour of contacting for a second time the entire available sample population of students.

Six small group discussions were held. The table showing how these groups were composed is in Appendix 5.

Students were invited to take part in small group discussions to be based on the student experience questionnaire (that they might have completed or seen advertised), with refreshments to be provided. The discussions were to last for one hour. At this point the imperative of holding the discussion groups meant that difficulties in ensuring attendance could not be remedied, and there was often not

time to reschedule planned groups in view of students' timetables changing unexpectedly with the culmination of their dissertation period. Nonetheless, the value of the small group discussions in facilitating dynamic and creative interaction was clearly seen, and the in-depth nature of the discussion schedule meant that all the topics were covered from several points of view.

Few postgraduates attended, but a by-product of this shortfall was the finding that the three mature students who participated shared the same approach as postgraduates in previous research, suggesting that experience of academia helps to shape student opinions.

3.5 Validity, reliability and representativeness

The low questionnaire return rate is a restriction on the representativeness of the figures. The previous student-centred research studies worked with larger samples of students. Accordingly the questionnaire results are to be understood as a guide to some of the principal features of student awareness and experience of research and consultancy in the University, and more particularly, as the foundations of the interview data used in turn to illustrate and expand on these figures. Other student-centred studies (e.g. Zamorski, 2000) report similar restrictions on generalisability.

It is considered that such data support the validity of the results (i.e. that they are relevant to what is being tested for), particularly as the interactionist approach favours intersubjective depth through group interviewing, which was generally achieved. This depth in the interview data responds to the research questions' desire for understanding, and it is felt that only larger-scale investigations of the same sort and methodology could be said better to provide for the validity of the results.

The reliability of the research is not a key issue. It is unlikely that the *same* results would be arrived at if the research were repeated because of local problems in obtaining respondents for the student experience questionnaire and participants for the focus groups, as well as the many localised concerns and issues raised by students throughout data collection.

However, none of the topics that were identified as significant features of student awareness or experience in the questionnaire were passed over by participants in the small group discussions, and all confirm or develop findings from previous studies (see above). Furthermore the two sets of data permit the development of a hypothesis about student learning experiences which is consistent with previous findings but suggests the value of the teaching–research nexus to students may additionally lie in its facilitating of a particular relationship with academic staff. Evidence from critical inquiries into the teaching–research nexus is adduced to support this.

Charges of naivety in assuming that the participants will relate faithfully their authentic experiences are countered firstly by the recognition that although the data generated are situated (not natural or raw), this is a result of allowing participants to explore hitherto largely unknown topics where otherwise no data would be available. Secondly, the textual nature of the data permits in-depth analysis and repeated iteration of categories in trying to uncover meaning. Thirdly, whilst accepting that participants may wish to claim more or less knowledge than they have, it is felt that the group element of the discussion irons out these irregularities in involving the participants in a shared task of recreating an acceptable account of their experiences.

Furthermore, an interactionist perspective on interview data would hold that interview responses are not to be treated as reports on reality but as 'displays of perspective and moral forms' (Silverman, 1995: 107). The suitability of such an approach to the research questions of this investigation lies in the desire to identify (normative and situated) student beliefs and views on research and consultancy, rather than holding to an ideal of authentic reports on student opinion.

3.6 Data analysis

Preliminary analysis of the data from the electronic questionnaire survey contributed in large part to the formulation of the discussion topics for the small group discussions

This analysis consisted of a comparative reading of the overall percentages of respondents from different disciplines and years of study responding to statements in the question sections as described in section 3.4 above and several close readings of the text sections of this survey. Along with the pilot discussion group these surface readings permitted drafting of the discussion topic schedule and some preparedness on the part of the researcher for the direction that the discussions were likely to take.

Once the questionnaire returns had been analysed sufficiently to allow inferences to be drawn about the possible effects of research and consultancy, the small-discussion group recordings were transcribed.

3.6.1 Coding of the discussion group transcriptions

Analysis of the discussion group transcriptions took place concurrently with the sessions themselves. This was intended to help the facilitator become familiar with the way the data generated by this method appears in recorded and transcribed form, and to help also with holding more effective discussion groups as the data collection progressed.

Adhering to the method of discourse analysis (Silverman, 1985) the transcriptions aimed at reproducing only what was necessary for the purposes of the research. That is to say for the present case that account was taken of all utterances, laughter, interruptions and verbal tics. Expressions such as 'you know', 'like', 'I don't know' or 'and stuff' which occur frequently without adding to the semantic content of the utterances were included too. The idea was to see how far these expressions articulated student understanding and how far they stood in its place. Laughter and interruptions are valuable in bringing out the rich illustrative potential of such data, but it was felt that features of content analysis or stricter discourse analysis such as timing pauses and accounting for non-verbal interventions were unnecessary and anyway impractical for the lone facilitator.

Coding began from an analysis of the results of the student experience questionnaire, where it was seen, for example, that the dissertation was the central element in students' experiences of research and that there was little

awareness of how staff might be involved in research and consultancy out of lecture time. These findings fed into the categories decided upon for coding [see Appendix 6]. Another theoretical guide in formulating these categories was arrived at through analysis of the findings of previous student-based research studies. Disengagement from University research and lack of availability of academic subject staff were two such findings.

Coding was also a dynamic process. As the discussion groups were transcribed new categories were added. It was only during the last group transcribed, for example, that a clear example of a student reading staff research outputs was encountered, and this was then treated as a new category along with all previous mentions of books and outputs, read or unread. To this extent the coding process was inductive and hypothesis-forming. This allows all data to be treated as potentially valuable according as they emerge more or less strongly from the recorded group discussions and means here that while certain research questions are being tested from the outset, new hypotheses can be produced as they appear in the data then justified with reference to the questionnaire data or their plausibility; ultimately leading to new research.

The questions on the role of the university were included to test how far students had awareness of what their institution did apart from teaching them. It had appeared from the questionnaire that such awareness was limited. They also provide an essential context to later discussions, often with a normative or critical tone, about what academic subject staff do or should be doing.

The distinction between active and passive experience is made to bring to the fore occasions when participants have been involved with research or consultancy and come to gain knowledge themselves. This picks up the aims of the research questions and can be aligned with the work of Kolb (1984) whose learning cycle requires the stage of experience (often fieldwork, see Cottingham, 2002) to precede reflection. Without such *active* experience through participation it is unclear how the teaching-research nexus is to benefit students at all.

All the same, *passive* knowledge of the practices of research and consultancy in the University is of interest because a) it may lead to reflection on how they can benefit students and b) it may show that dissemination of information on research

or consultancy activities is successful. These distinctions are seen in the organisation of the next Chapter, dealing with results relating to student awareness.

Finally, the positive and negative remarks were coded largely as they emerged from the data. Two topics of discussion prompted these reflections from participants, both based on results from the questionnaire and suggesting that increased enthusiasm and reduced availability on the part of staff were the two most noticeable features to students. The other categories were created as the data analysis progressed (see Appendices 6-8 for tables of coding categories)

Coding of the transcriptions took place at the level of the extract. For the purposes of this research an extract is either a single utterance from a student or an exchange amongst two or more unified by a single theme. In practice it is relatively simple to identify extracts, although when several participants are involved there is often much that is incidental to the theme but part of conversational convention (e.g. 'Mmm' or 'Yeah but...'). Those extracts that could be related to the categories below were taken out of the transcriptions and sorted into like groups. Thereafter they are used in Chapter Four as illustrative of the findings. However, the coding process, borrowed from discourse analysis (see section 3.6.2 below) and itself constitutive of data analysis, allows these extracts to represent a certain reality expressed by student participants and stand for experiences recognisable to those who were involved.

The extracts used in Chapters Four and Five are presented without pauses or symbols representing inaudible passages. These were not thought to be germane to elucidation of the research questions. All proper names that might identify staff at the University are suppressed and the participants are anonymous, save for their disciplinary area.

3.6.2 Discourse Analysis

The philosophical roots of the broad range of research techniques known as Discourse Analysis (Silverman 1985) lie in the work of the linguistic philosophy of J.L. Austin. The contemporary research concern for analysing the activities

performed in talk arises from his observations in How to Do Things with Words (1962) that utterances are not merely descriptive but can be used to perform actions. For example, it is in the saying of certain phrases like 'I arrest you' that the action is performed.

Discourse Analysis (DA) is a valid technique in social research when allied to an argument that seeks to explain how people use certain concepts or structures in their utterances to convey non-verbal meaning or adopt social positions. The task of this research, to get close to the reality of students' learning experiences as shared in a non-academic peer environment, requires that the transcription data be coded and ordered to form part of a valid narrative about these experiences. It is this search for recurring structures and beyond them, a hidden meaning that may tell us more about the student learning process, that means a modified version of Discourse Analysis is appropriate to this research.

It is recognised that the small scale of this research and the nature of the truths looked for (that the content of the utterances expressed in the extracts used is basically true and authentic) are not powerful arguments for claiming a full employment of Discourse Analysis as the methodology. Discourse Analysis's focus on the structure of the utterances and the signs used to convey meaning and social role adoption (Silverman, 1993) in the student discourse (see Johnson, 1995: 82-83 for an explanation of qualitative methods' uses of types of discourse) is not shared here, except in so far as certain utterances are identified as indicative of students' default, constructed or (un)informed beliefs about research and consultancy. These typical discourse positions are noted in Chapters Four and Five where they have a clear bearing on the truth-content of the utterances.

Nonetheless, Discourse Analysis is a methodological tool that uses transcription of non-natural and recorded, verbal data to discover meanings through close analysis and coding. These important shared features mean that this current research claims considerable methodological strength and validity in its conclusions from the school of Discourse Analysis.

3.7 Summary

The broad sociological theories drawn on in the methodology used are interpretivism and interactionism (owing to the inter-subjective nature of the data) and its epistemology is social constructivist. This allows that the truth being searched for is not objective but provisional, and valid in that it represents authentic experiences of the reality in question (here, Level III and taught postgraduate students' learning experiences). The research uses a mixed-method approach (triangulation) to gain two different sets of data, which are nonetheless linked by the important methodological step of generating topics of discussion for the small-group discussions from the quantitatively analysed questionnaire survey, easily available to the entire sample population.

Discourse Analysis provides a methodological underpinning for analysis of the transcribed discussion data and the coding this calls upon is a means of testing hypotheses from the related body of recent research studies in the same field. This inductive method also generates new hypotheses that shed light on the research questions and permit identification of one of the processes involved in learning in higher education. The identification of elements of the student learning process is identified by Kolb (1984), Elton (1986, 2001), Healey and Jenkins (2000) and Hattie and Marsh (1986) in differing ways as instrumental in improving the student learning experience and showing how research and teaching can be unified in this aim.

Following the qualitative data analysis steps as described in section 3.6.1 provides a number of data files containing extracts from the small-group discussions whose content satisfied the coding category assigned to that file. This transcribed verbal data built upon, and is added to, the quantitative analysis of the student experience questionnaire. In this way the main findings of both sets of data are brought together here and the research questions about difference in level of study and discipline addressed from two angles.

The next chapter presents the findings of this research generated from application of the data collection and analysis procedures described above.

Chapter Four Student awareness of and involvement with research and consultancy

4.1 Introduction

In order to account as fully as possible for the types of awareness and experience that questionnaire respondents and discussion group participants had, this section describes the main features of their contributions in terms of both passive experiences (awareness of) and active experiences of (involvement in) research and consultancy.

Passive experiences are those that require little on the part of the student (except maybe their attention or attendance) such as hearing research discussed in lectures or seeing advertising for University research/ consultancv seminars on notice boards. Active experiences include examples of students doing their own research or consultancy work, whether independently or for a lecturer. This level of analysis is adopted in the light of the findings of previous student-based research into the teaching/ research-consultancy nexus indicating that undergraduate students feel that the university's research and consultancy activities pass them by and that they would welcome more chances for active involvement (Jenkins *et al* 1998, Zamorski, 2000).

4.2 Students' passive experiences of research and consultancy

4.2.1 Awareness of research culture in the University

The first major finding relating to students' passive experiences allows us to gain insight into how students might come to learn about research and consultancy. Overall, 56% of respondents claim to have heard *a member of staff discuss their research or consultancy work in a module*, a figure that does not vary much according to field or level grouping.

Postgraduates do recognise this more than undergraduates (61% - 55%). A higher level of awareness of the practice of research and consultancy may mean that

they recognise more readily instances they come across in lectures and academic staff members' discourse.

The Business School grouping scores particularly low in response to the related statement *hearing a guest lecturer discuss their research consultancy work in a module* (33%, overall 44%), suggesting either that few guest lecturers are invited in this field or that such lectures are infrequently attended by the students. Guest lecturers are overall a less recognised feature of teaching provision by all groups of respondent.

These are considered here to be passive experiences because they do not require the student to seek out information outside their normal curricular routine. The fact that hearing (guest) lecturers talk about their research and consultancy was a relatively common feature of their experience begins to point however to the primacy of student – lecturer relationships in the student learning experience. This is also evident in the extracts quoted below.

Many of the participants were able to report instances where their lecturers had mentioned their own work or that of others and examples were cited in all five group discussions analysed:

> **1** 1: Especially [*name of lecturer*]. He uses a lot of examples from his own research, like [*name of course*] the module was practically based around his longitudinal study he did about 15 years ago with [*name of academic*], isn't it?
>
> 2: Yeah.
>
> 1: So basically the whole module was based around that!
> [Two Level III females, Sports & Exercise Science]

> **2** Yeah, I think they do say a lot in their lectures that... but they don't actually - they kind of just gloss over the important bits, don't they?
>
> They don't really go into it that much about their research or... because they don't really go into what they're done, or the past or anything, just particular things they pick up on that are relevant to the lectures. But I think it would be useful if we found out more about it, because it would encourage more people to maybe pursue research...
> [Both from Level III female student, Sports & Exercise Science]

3 But nevertheless, it is part, as you said, part of the research process. I mean, [*name of lecturer*], one of the [*name of subject*] tutors is, I think is superb in that field, in that she constantly talks about her research, to sort of, in... [*name of field*], and the work... the work that she's doing with... some of the other lecturers at [*2nd university*] and [*3rd university*] and it's constantly talked about. And we talk about it as a group, and it's, you know, I have to say, I've learned a great deal. Whereas as you say, you know, sitting there listening to a, sort of a dry lecture, you can just... be off with the fairies, you don't have to be there, do you?
[Level III mature female, Geography]

The most revealing discussion group extract on the topic of guest lecturers is from a mature Business School student, and anticipates besides some potential benefits to students of University research activities:

4 I remember one particular lecture, last semester, the usual lecturer couldn't make it so somebody else gave it and at the end of it he said, "The book you really ought to be reading is your own lecturer's book on the subject, which is the definitive book on it.'
It was suggested that we ought to go out and buy this book, not actually by the lecturer who'd written it, so I thought it wasn't as bad as that, but when you actually got hold of it and started reading it, you thought, 'This is actually really, really good stuff' and it was written by three of them in the business school with contributions by another nine in the business school, so the twelve of them had written this thing which was absolutely first-class, and talking to friends at another universities, 'Oh yes, we use that'... tremendous.
[Level III male mature student, Business Management & Politics]

5 Yeah, they have like, guest speakers every week or every other week, coming in. Also, you see a lot about... well, I've seen a lot about the research place, because my dissertation tutor is part of the Leisure and Sport research.
[Level III female, Sports & Exercise Science]

This last extract illustrates also the way that the dissertation process can lead onto some awareness of wider research interests in the University, here again, through the individual staff member concerned.

The extent to which universities succeed in communicating their status as research/ consultancy environments to their students is discussed in this section,

and some findings that shed light on this are provided before the major question of individual staff members' influence is fully addressed. In this respect 59% of all questionnaire respondents are aware of *notice boards carrying information on research/ consultancy or postgraduate opportunities* and 50% have seen that *seminars and conferences take place at the University*.

The topic of publicity on notice boards for visiting speakers was encountered in just one group discussion, where however the opinion was advanced that this was an important feature of university life:

> **6** I think actually that visiting lecturers is really important, because there's quite a lot of posters go up, 'Professor McGonagle of Hogwarts University is coming to speak on such-and-such a thing', and those seem to be relatively well advertised around the notice boards.
> [Level III male mature student, Business Management & Politics]

The same student immediately adds a caveat to his first statement:

> **7** That sort of thing isn't as well advertised as it could be. It would be interesting to know a month in advance that so-and-so is giving a lecture on something that might be of interest.
> [Level III male mature student, Business Management & Politics]

The tone of the debate had been changed by another participant's sceptical reaction (non-verbal) to his first remark. Here she explains why:

> **8** Yes, occasionally by chance you sort of see a list, and think, "Oh", and half the time I see it after it's gone anyway, but, yeah, occasionally, you do, you know, on the notice boards.
> [Level III female, Sports & Exercise Science]

A smaller figure of 40% overall is aware of *research/ consultancy posters and displays*. A likely explanation for this is that less research and consultancy results in specific poster/ display-type outputs than there is research and consultancy advertised generally around the University. Alternatively, it seems likely that respondents felt less certain about indicating they were familiar with definite outputs (i.e. posters or displays) than with research culture in general. It is largely undergraduates who contribute to this total (44% of Level III respondents as

opposed to 26% of postgraduates). This may be because postgraduates are less often in the University than undergraduates, or because their awareness of research is focused more narrowly in their subject area. All the same, this relatively high overall figure of awareness is not reflected in the group discussions. One group did however realise that they had seen this sort of evidence of research/ consultancy:

> **9** M: They do have display boards, don't they? And they do present their latest papers, in –
>
> F2: Do they? [laughter]
>
> M: - seminars.
>
> F1: Do they?
>
> M: You've seen [*name of lecturer*] and his [*lecturer's specialism*] stuff -
>
> F2: Yes, vaguely, but I'm just -
>
> F1: Oh yeah.
>
> F2: - not particularly interested in [*laughter*] Physical Geography, so...
>
> F1: Actually, yeah.
> [Male & 2 females all from School of Environment Level III]

Conversely, although this is not illustrated in the group discussions, it is the postgraduate respondents who provide evidence in the questionnaire of *awareness of research seminars and conferences*, with 68% of these respondents indicating that they knew these took place (50% overall). Finally, respondents from Leisure,Tourism, Hospitality & Sport are more aware in all of the above respects than their counterparts from the Business School, as are the third disciplinary grouping of students representing the 'Other' fields. An early hypothesis is the lack of awareness and experience of research and consultancy in students from the Business School.

It should be noted that there was no topic of discussion *specifically* related to these themes. Further knowledge relating to them was expected to emerge from the questions on general personal experience of research and consultancy in the University. That it did not may suggest that participants in the group discussions

were unaware of such visible effects of the research/ consultancy culture in the University, or that they preferred to discuss matters from a more personal perspective. All the same, the relatively high incidences of awareness claimed from the questionnaire suggest that at the very least, one student in two will have some idea of one of the ways in which the University communicates its research/ consultancy activities to its members.

4.2.2 Awareness of subject staff's research activities

As was noted at the beginning of this analysis, students' main focus when talking about research and consultancy in the discussion groups was on individual members of academic staff. Some data relating to this theme offers evidence of student experiences of a passive nature. For example, the group discussions show that there is considerable awareness of research and consultancy taking place in the university. But this awareness is rarely of a well-informed nature, with observations about subject staff thought to be research-active frequently followed by reservations and uncertainty about what actually happens, e.g.:

> **10** Well I know that the Sports School do have to do consultancy to get some stars or whatever and if they get like, five stars it's the best universities, like [*name of university*], but they have to do, 'cause that's why it's linked to the Health Authority. It's not just my lecturer; we've got a whole body that's linked to [*name of county*] Health Authority, and they give out consultancy work and then, like, most of the lecturers are consultants with, like, one scheme.
>
> Me: So in this sense, consultancy is working with an authority. Advising them?
>
> Yeah, I presume so, yes. I mean I don't really understand exactly what they do, but they obviously - sorting out the mental health side of local authorities. And there's another bloke called [*name*] who does apparently, nutrition and all that sort of consultancy for athletes and things like that. And we had another lecturer who's left now called [*name*], who used to be a psychology consultant to the rowing team, the British rowing team.
> [Level III female, Sports & Exercise Science]

> **11** But again, I can't say that I've ever heard, or I don't know of a single instance in the Computing department where that [*research or consultancy*] has happened.
> [Level III male, Computing]

Regret is expressed that more was not known about lecturers' personal interests as a part of the university experience:

> **12** But there's no kind of wider kind of publicity that there is research going on and what people are doing.
> Level III female, Sports & Exercise Science]

A striking finding of the analysis is how the discussions consistently fall short of real, working knowledge. The participants repeatedly show awareness of research/ consultancy but are not able to give clear examples. This explains the shortfall in understanding raised by participants in one group:

> **13** M2: I was in probably the 2nd year into the course, made aware that there are a few people actually doing a little bit of research on the computing side, at least doing PhDs. It seemed to be something that was very much a personal thing, wasn't sort of particularly an option, it was something that someone has decided to do and then you'd have to talk to people about that, it was a big decision, didn't seem to be an option for the majority of students, there didn't seem to be any research or anything to get involved with.
>
> M1: Mmm, as far as I'm aware even now it's not really brought up a lot.
> [M1 – Level III male, Computing; M2 – Level III male, Environmental Management & Policy]

> **14** Most of our third year lecturers are involved in research: a lot of them are linked. I mean you've got [*1st name*] and [*2nd name*] in the [*name of unit*], [*3rd name*] does a lot of research; [*4th name*], I'm sure he does, so yes, I think a lot of our third year ones do. But going through the first and second year, sort of the first year, they didn't mention it and I've got a feeling they don't do it.
> [Level III male, Computing]

So, many extracts display signs of general understanding of the practice of research and consultancy, and are frequently linked to informed suppositions about staff members' interests.

The topic of discussion on subject staff's research or consultancy commitments picks up the results from the questionnaire, where students were asked to *estimate the number of staff in their subject area occupied in research or consultancy work*. The figures show that only 27% overall of respondents

considered that more than 40% of their subject staff were so employed. Indeed, 23% overall believed that *none* of their subject staff had any research or consultancy interests. This is a fairly constant finding across the level and discipline groupings. If taken together with those who chose not to reply to the question, 36% of the overall sample offered no knowledge of staff involvement in research or consultancy.

Of the different groupings represented, postgraduates are the exception in their estimation of numbers of research/ consultancy-active staff: although a similar figure to the overall total (24%) believes that none of their subject staff are research/ consultancy-active, there is also a better spread of views over the full range. A relatively high number (16% against 5% overall) believe that between 81%-100% of their subject staff are involved, and one might surmise that this is due to a higher level of exposure to research and consultancy activities or outputs. It should be emphasised that these figures relate to student perceptions, and actual levels of staff involvement are not taken into account.

Two themes are reinforced by these data. The first is the relative awareness of research and consultancy amongst postgraduate students and the second the relative lack of awareness of those from the Business School category. It is this second that is borne out by the above data from the questionnaire relating to beliefs about subject staff's activities. No grouping scores more highly in estimating a level of involvement of only 0-20% of their subject staff (63% against 57% overall) and none is less adventurous in proposing that most of their staff are engaged in these activities (above 60% of staff involved: 5% against 11% overall). This is confirmed in responses to the follow-up question, where 47% of Business School students, more than any other grouping (40% overall), claim not *to know how their previous estimate compares with the situation in the rest of the University*.

Returning to postgraduates, where 40% (compared to, say, 22% in Business School and 18% overall) of respondents imagine that the situation with staff research is the same across the University, we may conclude that the grouping with the highest awareness of staff research or consultancy, the postgraduates, believes this is (or should be) the case in the rest of the University too. These

findings may be illustrated further by some contrasting quotations from the questionnaire:

> **15** I have little awareness of any research done by staff at this university.
> [Level III male Business Computing Systems & Psychology]

> **16** Well a lot of our tutors work at the same time as they're lecturing. They're either part-time or they work very hard...
> [Postgraduate female, Landscape Architecture]

The trend is seen again in responses to one of the Likert Scale statements from the questionnaire, where more than half (52%, against 44% overall) of undergraduate respondents agree that they *have little awareness of their lecturers' research/ consultancy interests*. This is in contrast to the 30% of postgraduates who have the same view. 57% of postgraduate responses also disagree with the statement as the table below shows:

Table 4 *I have little awareness of my lecturers' research/ consultancy interests*

	disagree	neutral	agree	
Undergraduates	29%	18%	52%	n=118
Postgraduates	57%	13%	30%	n=23

It is striking that the percentages for undergraduates and postgraduates are almost reversed here. The relative lack of knowledge claimed by undergraduates and substantiated by many extracts from the discussion groups is a major finding of this research.

Additionally, 59% of respondents from the Business School grouping agree compared to 39% from Leisure, Tourism, Hospitality & Sport. This comparison

helps develop the hypothesis about relatively strong awareness of research and consultancy amongst students in the Leisure, Tourism, Hospitality & Sport grouping.

The most common student response to the question whether they recognised possible staff research/ consultancy activities from a list suggested to them is the 57% of all respondents who agreed that their subject staff were involved in *writing for publication*. This figure remains relatively high for all groupings of respondent: the hypothesis that Business School respondents are less aware of research and consultancy activities is not borne out here, as 59% believe their subject staff write for publication. This is however the only occasion where Business School awareness is higher than the overall figure. Again, postgraduate respondents display strong awareness of this activity (64%) but the grouping that has the highest percentage recognition is that of 'Other' subjects (71%). The composition of this group (see Chapter Three) holds some clues about why this is. We need to ask whether students from two Schools (i.e. those following 'joint' courses) have a different experience of subject staff's research and consultancy from those in one school only. This is an area that can be exploited, especially as the effect of modular courses on students becomes a topic of popular debate (Brecher, 2002).

There is generally good awareness of the possibilities that staff have to pursue their own study. While 43% of all respondents recognise that their subject staff can *undertake research degrees*, awareness is again most pronounced in the Leisure, Tourism, Hospitality & Sport grouping, where 64% of respondents recognised the statement. This is the only grouping of students for whom staff's research study is more familiar than their writing for publication (64% against 59% respectively).

Another feature of these figures that stands out is the 32% of respondents from the 'Other' disciplines who are aware of staff undertaking research degrees. Not only is this half the figure for the Leisure, Tourism, Hospitality & Sport but is also the only grouping for which fewer respondents knew about staff undertaking research degrees than did about staff writing for publication (48%).

A tentative explanation of this set of findings is that the great majority of respondents from the grouping of 'Other' disciplines were arts and humanities students and that their subject staff are less likely to be following research

methods courses appropriate to the natural or social sciences and recognisable to students. This account draws on views on the nature of research in different disciplines (Robertson and Bond, 2001) and fits with the notion that arts and humanities staff would be engaged in producing personal interpretations of previous research and *writing for publication* (64% postgraduate, 71% 'Other' subjects) in order to disseminate this rather than following research programmes. It is of course possible that these staff simply tend to talk less about their personal research commitments for reasons which could be investigated in another piece of research: perhaps they already have such qualifications?

Awareness of staff's *funded personal research or consultancy* was also particularly marked amongst the postgraduate sample (44% against 33% overall) and students from the 'Other' fields (48%).

Awareness of non-funded personal research was considerably less (15% overall) and follows the pattern of response throughout the other subdivisions under investigation (see appendix): that is to say, that Business School respondents show the least awareness (10%) and postgraduates and students from 'Other' disciplines the most (26%). This may be an instance of an 'Ivory Tower' model of research, with students from this category (largely humanities disciplines) idealising their staff's role in contributing selflessly to knowledge. There is no evidence that any other grouping supposed that this took place.

The *supervision of research assistants* (7% overall) is a statement largely unrecognised in the questionnaire and not picked up at all in the discussion groups. An explanation for this may be the confusion occasioned by another statement, *supervising research students*. To an undergraduate it is conceivable that the two roles are fairly interchangeable, depending on the sophistication of her understanding of the structure of the institution. Nor do the postgraduate respondents display a stronger awareness of subject staff's possible role in the supervision of research assistants: 3% recognise the statement and make the postgraduate figure the lowest of all.

On the other hand, the supervision of research students is known of by 39% overall, a figure which fluctuates only slightly across the groupings, excepting the 60% of postgraduate respondents. Given that many of this group will themselves

be interested in research and further learning, and will have carried out at least a supervised dissertation or final-year project previously, it is unsurprising that this should be the case.

Staff research and consultancy activities form one of the major topics in the group discussions. Awareness of these activities was expected to emerge particularly through participants' reflections on the topic: What impression of research/ consultancy do you receive from tutors/ other staff in your subject? It has already been observed that students' formulations of their lecturer/ tutors' research or consultancy activities tend to the superficial. Thus we find again that a Level III Environment student is able to sketch out a broad vision of staff activities whilst simultaneously revealing and regretting his lack of further insight:

> **17** I imagine that perhaps the lecturers actually are doing this [*collaborating across disciplines to do research*]. So we have this huge amount of lecturers doing this consultancy work but completely detached from what the students are doing and it's become, 'lecturers lecture, and in their spare time, do the research.'
> [Level III male, Environmental Policy and Management]

> **18** I don't get the impression that they [lecturers] do research really that much. Not really thought about, never really thought about them actually.
> [Level III female, Sports & Exercise Science]

This last extract illustrates well the default reaction of many of the participants to questions about their awareness of staff research. The extent to which this is indicative of their instinctive protection of what Silverman (1985) refers to as their 'stake' in the conversation [see Chapter Three] is open to question but it can at least be said that the reaction is common across all five groups.

> **19** I know one lecturer who's done some external work, but I don't know whether it was accredited with the College, or University. I'm not sure what that...
> [Level III male, Computing]

4.2.3 Awareness of subject staff's consultancy activities

This last extract opens up the topic of consultancy. It is difficult to tease out student experiences relating particularly to consultancy from the questionnaire data since the statements that students were asked to recognise generally included it alongside research. However, the group discussions provide rich illustrations of student experiences of the nature and practice of consultancy. Indeed in the first case the participant is extremely aware of the possibilities of linking her subject and work in the 'real world'.

> **20** That's how I see consultancy, but then that's probably because ever since I was in the first year they've banged on about, 'Oh, when you leave here you can be a computer consultant and earn lots of money, or a business analyst' and that's consultancy, well it's a consultancy term; they consult you about this, that and the other.
> [Level III female, Computing]

> **21** We have had ones who use things they've done in the past: one of the lecturers used to write policies for companies, so he'd use ones that he'd evaluated or written as a teaching aid for us to look at and evaluate.
> [Level III male, Environmental Policy & Management]

> **22** And then there's other lecturers, I think they're more academic, like [name of lecturer] and [name of lecturer] and they're more... write papers and don't do consultancy, they just do academic stuff.
> [Level III female, Sport & Exercise Science]

We can see here again in the last remark what might be thought of as an 'Ivory Tower' model of research, where students imagine academic research to be the pure pursuit of knowledge, unalloyed with 'real-world' concerns. This image would type the academic researcher as solitary, dedicated and detached from matters extraneous to his immediate research topic. It also points to the fact that students do not always grasp the different ways in which universities conceive and produce knowledge. This is an especially pressing lack given that what counts as valid knowledge is increasingly subject to change as producers multiply and diversify (Brew, 2001).

23 I think a lot of our lectures have been helped, like the [*name of subject*] one is helped by having a consultant leading it: she does know, you know, what's happening today.
[Level III male, Environmental Policy & Management]

24 Yeah, they [*her lecturers*] are definitely consulting, because, you know, you need to keep in touch with what's going on in the business world and you can notice that lecturers that have been here a long time, I don't know if you have noticed this, with Computing they're having to teach themselves the new packages that come out and they're not always, you know, on top of it really, are they?
[Level III female mature student, Business Information Technology]

25 Drawn from examples of business consultancy to demonstrate points of business practice.
[Level III female, Information Systems with Business Information Technology]

The extracts above present a revealing student understanding of the place of consultancy in the student learning experience. That is to say, the up-to-dateness of the staff member is seen as paramount to her ability to teach effectively and it is desirable that relevant teaching materials from the field are provided. Indeed in the last two extracts the participant is extremely aware of the possibilities of linking her subject and work in the 'real world'. These themes are covered more fully in section 5.2.6.

26 I don't know whether the University or universities get paid, have an income from this sort of thing [*consultancy*]. But with research the impression I get is that it's much more of an individual lecturer type of thing.
[Level III female mature student, Business Information Technology]

27 1: I haven't heard about it [*consultancy*]. I don't think so. Because there's the [name of research unit] which is a research... I imagine it's got research.

2: Yeah.

1: - but I don't think we have any consultancy, or that kind of thing.

2: I haven't heard of anyone specifically do it -

1: No.

2: - but if you think about [*name of lecturer*], and what he did – with the rowing team and stuff like that -

1: Oh yeah, I suppose.

2: - that's got –

1: Yeah.

2: - to be sort of, considered it hasn't it?

1: But then that might not be directly through the university.

2: No.
[Two Level III females, Sports & Exercise Science]

The two above extracts illustrate the baseline knowledge that students form for themselves in relation to consultancy. When asked to think about their experiences they are able to draw on a body of informed suppositions that explain the activities that the University conducts when not directly teaching students. It is not surprising however that if the set-up of the lecturer's consultancy work is not explained to the students they remain unsure about how it fits into university life. This is the case of this participant:

28 [*my question: what do you know about research & consultancy?*]

I would think - probably based on experience of the University of Gloucestershire Business School where they develop business ideas and businesses come to this University to get advice about how to run things from an IT point of view.
[Level III female, Computing]

4.3 Summary of passive experiences

It is clear that many participants in this research are aware of the practice of research and consultancy and are able to offer examples of how they have noticed it taking place. However, students are often vague about how this work fits into their academic subject staff's commitments and whether they might themselves have the chance for involvement. Sometimes students call on a model of higher education that privileges pure disinterested research and inspired teaching above everything else, effectively putting the student at the centre of the academic's world.

The principal findings from analysis of the data relating to students' passive experiences of research and consultancy are as follows:

- Over half of all participants had heard research or consultancy discussed in a module and there is evidence in the discussion groups that students welcome this where it seems relevant to them;
- Students are able to venture explanations of how they think research and consultancy are practised, but these are often imprecise;
- There is evidence that one in two participants are aware of University research and consultancy through some of its outputs, e.g. notice boards, displays or books and journal articles;
- There is generally considerably lower awareness of research and consultancy as practised by their subject staff members amongst the Business School students than in the school of Leisure, Tourism, Hospitality & Sport;
- Postgraduates and mature students tend to be more aware of their lecturers' research activities than do undergraduates;
- Opinions on research and consultancy can sometimes follow a traditional 'apprenticeship' (Zamorski, 2000) pattern of student expectations of HE where students see themselves as subservient to staff interests.

4.4 Students' active experiences of research and consultancy

This analysis of active experiences of research and consultancy is conducted in the light of findings from previous student-centred research studies that suggest that students do not feel informed or consulted about the research that takes place in their university (Jenkins *et al*, 1998; Lindsay *et al* 2002; Zamorski 2002). This is however balanced by the interest and insights that previous student participants have also displayed and so in the spirit of Brew (2003), who advocates a study model of academic communities of practice where students and academics both have roles as participants, and Moses (1990), Willis and Harper (1999) all of whom claim benefits for student learning through active involvement in aspects of the research process, the extent to which students feel they have a role as

'legitimate peripheral participants' (Brew, 2002: 15) in their academic community is at issue.

In addition it is one of the aims of this study to characterise the nature of the student experience of research and consultancy, of which one key element is likely to be research-led teaching (see section 1.2). This is claimed to offer benefits for students and forms part of the scholarly approach that teachers bring to their profession. The question is addressed here of what level of engagement with research-led teaching students have had, and how it is presented to them as a feature of academic life.

4.4.1 Dissertation and independent study

The key finding in this section once more is ultimately the extent to which students interpret their research and consultancy experiences in relation to individual members of academic staff. This is seen first in discussion about the Level III dissertation or independent project modules.

Firstly, 72% of all respondents had *experience of undertaking a dissertation or thesis*, and a further 54% had *undertaken an independent project at the University*. These two figures relate an important way in which students can gain active experience of research or consultancy and are supported by the response to the question whether students *have learnt most when undertaking their own research/ consultancy project or dissertation*, at 45% agreement overall (21% disagree).

Similarly, 47% of respondents agree that *the most effective teaching is when the lecturer involves me in aspects of the research/ consultancy process* (10% disagree). All these findings indicate a level of support for the chance of gaining active involvement in research or consultancy work, as well as the recognition of certain benefits this confers. These benefits are explored more fully in Chapter Five.

The following discussion group extracts illustrate how participants see the role of the dissertation or independent project and introduce also the important role of the individual member of academic staff:

1 Me: What other forms would it [*research*] take in this university?

Well, it could happen through the dissertations and final year projects...

Me: Absolutely.

I mean, I've just sort of handed in, that was, sort of, fairly groundbreaking. That was effectively a mini research project.
[Level III male, Computing]

This participant goes on to bemoan the lack of interest shown by the University in a piece of software he had written and compares the attitude of the Computing department unfavourably to other disciplinary areas. The place of the dissertation in their studies is considered by these participants:

2 2: I'm not sure the third year's a lot different apart from the dissertation.

1: Well in the Computing field they certainly bang on about the third year. There is this, 'the third year' – you do that in the 'third year'.

2: We get that.

1: You know, 'that's the sort of thing you do in the third year'.
[1: Level III male, Computing; 2: Level III male, Environmental Policy and Management]

Half of the respondents from Leisure, Tourism, Hospitality & Sport (50%) feel that they have learned most when *undertaking their own research/ consultancy project or dissertation* and the extended discussion group exchange included below illustrates the sort of understanding that might develop as a result of such involvement:

3 [*my question: now, what process do you go through... what is the research process that you're going through when you're writing a dissertation?*]

1: What, the actual sections, or what do you mean, how we actually did it?

Me: Yeah, how are you doing it, how is it researching, because it is, I agree with that, I just wonder... what is the process of writing a dissertation, what do you need to do?

1: First of all, just, erm, find -

2: Find a topic.

1: Yeah, find a topic, obviously, yeah...

2: That you're interested in.

1: Yeah - past research, look at other people's research, then you start to look...

2: Using your research and get... yeah.

1: Yeah.

2: Mmm. Do your research and start to write, so do your actual own research and then include it by using both... backing up.
[Both Level III females, Sports & Exercise Science]

Students are often keenly aware of their need for guidance but unsure how best to profit from their academic staff. There is uncertainty, when tested in the Likert scale question, over whether *research and consultancy commitments make staff any less available to students*: in every disciplinary grouping the largest share of respondents are neutral on the question. Only amongst postgraduates do a majority disagree, with 39% believing that research/ consultancy-active staff are likely to be *more* available. The mature student below, although not at postgraduate level, shares a similar perspective to that suggested by these data:

4 M1: I think the only impact that research – knowing about academic stuff/ research interests - has been when it comes to the dissertation, where they do try and fix you up with somebody whose interests coincide with yours.

M2: And when you do start on the dissertation, however tightly focused it is to start with, when you get onto the literature review it explodes into a dozen different directions and you quite often want to speak to... want to find out if there is a piece of expertise.
[both Level III mature male, Business Management & Politics]

Here the link is readily made between the dissertation requirement and members of academic subject staff.

Some variations in the questionnaire figures should be noted here. Overall, they show that the most common point of encounter between students and research or consultancy is the dissertation. This is overwhelmingly the case for undergraduates (78%) and for students from the Leisure, Tourism, Hospitality & Sport grouping (80%) and 'Other' fields (81%) but not for postgraduates (42%). A

possible explanation for this is that Level III participants were actively involved in their dissertation at the time of data collection whereas the postgraduate respondents were not.

Additionally, the relatively low recognition of this statement by the Business School respondents (67%) is the first indication here that they are less aware of the existence of opportunities (or that fewer exist) for active involvement with research in their field.

The same remarks apply to the statement concerning the independent project, where the most notable findings are the 74% of Leisure, Tourism, Hospitality & Sport who recognise the statement and the 37% from the Business School. This suggests something already about the research culture or curricular structure in the two schools, a point raised above and a hypothesis developed throughout this chapter.

Undertaking the final year dissertation remains for many students their principal experience of research. It is also their main point of *active* contact with the research or consultancy conducted elsewhere in the University by staff. There is some reflection on the research process and how students might encounter it and turn it actively to their advantage.

> **5** Dissertation tutor has up-to-date qualifications + research material in chosen topic, which enabled me to gain greater understanding in the subject area
> [Level III female, Tourism & Marketing)

> **6** Has aided me in research process of dissertation
> [Level III female, Marketing Management & Tourism]

A set of remarks drawn from the questionnaire shows that students from the Business School grouping are able to appreciate the benefits available to them if their subject staff are active researchers:

> **7** Discussed my dissertation/thesis with a PhD lecturer who gave me more confidence about my original idea + made me realise some future possibilities I had not thought about.
> [Level III male, Computing + Business Computing Systems]

8 [*Name of female tutor*] investigating in the fishing industry.
[Level III female, Business Information Technology & Business Computer Systems]

9 Specialist knowledge within their field.
[Level III male, Business Information Technology & Business Computer Systems]

The first quotation in particular is of a form frequently encountered, linking as it does the student's first attempts at individual research in the dissertation and a realisation of the research already going on around them. Similar quotations are found in other disciplines too:

10 Me: Have you done it [*research/ consultancy*] yourselves, or encountered it?

2: The dissertation.

1: Yeah.

Me: Dissertations?

1: Also, for another module as well, 'Preparation for Sport', it was only a 4,000-word project but we could use research for it so we carried out a project.
[Two Level III females, Sports & Exercise Science]

11 The research conducted by [*name of tutor*] and [*name of graduate student*] was a significant factor in determining my dissertation topic. The work was published, but having access to both of them to discuss their work in particular and my dissertation in general helped greatly to clarify issues and define my research area. I also think that the research being done in customer relations management and service quality has contributed to my desire to concentrate in this area, and to develop my own consultancy skills.
[Postgraduate male mature student, MBA]

This extract shows great insight into the place of research and consultancy in the student's own learning experiences. As a mature postgraduate in a vocational field, the student was perhaps well placed to appreciate and profit from the opportunities available to him.

As seen in the section dealing with negative findings, the dissertation requirement led to many participants having problems with tutor availability. Often this concern

seemed to proceed from an underlying desire for guidance, and a foretaste of this is included below, where it is acted upon:

> **12** 1: As I say, they just put us into dissertation groups didn't they, we didn't actually –
>
> 2: Yeah.
>
> 1: - when I went to see some lecturers about what topic to pick, and they kind of guided me from that respect, but it was more me saying what I was interested in rather than them saying, "Maybe you could do this", or... or giving ideas about what they enjoy doing because I think that could have swayed my decision of what I would have studied.
> [Both Level III female Sports & Exercise Science]

This exchange illustrates one aspect of the balance that needs to be struck for students between free, self-determining learning and guidance from staff.

So, many of the experiences enjoyed by students in relation to research and consultancy were facilitated by increased or better 'quality' contact with their subject staff, generated during the dissertation period. Students placed a high value on the availability and communicative ability of their lecturers and tutors during this period.

4.4.2 Active participation in research training or research/ consultancy outputs in the classroom

Ways to allow students to take ownership of research and consultancy themselves might be found in demonstration of and involvement in various aspects of the research process in lecture time, and so the questionnaire refers to the *development of research/ consultancy techniques*.

In this respect, 25% overall are in agreement that they have developed their research techniques through engagement with research or consultancy. The one outlying figure in this connexion belongs to the grouping of the 'Other' disciplines, of whom 40% agree with the statement. To test this discrepancy we can turn to the Likert scale statement where respondents are asked whether they feel insufficient attention has been given to developing their research/ consultancy skills. Here, the

global figure of 39% in agreement conceals some salient points. First of all, 46% of respondents from the 'Other' disciplines find themselves in agreement with this statement, suggesting either that the research training they did receive was not felt to be enough or that respondents were not consistent between the two assertions.

Otherwise it is noteworthy that although 40% of undergraduates (as opposed to 30% of postgraduates) felt they had *not been given enough help in research techniques* only 9% of them agreed strongly with the proposition. It could be that undergraduate respondents recognised their lack of provision in this area but did not feel that it had seriously inhibited their learning experiences while at the University.

The grouping which is least in agreement with this statement is that of the Leisure, Tourism, Hospitality & Sport students. Just under a third, 29%, agree with the statement, although a similar figure of 24% disagree too. This indicates that Leisure, Tourism, Hospitality & Sport students have strong opinions and allows the hypothesis that they have more awareness than, say, Business School students, to develop further.

Occasional evidence of training in research methods appears in the discussion groups:

> **13** And he talked about the unit, and some of the work that he'd conducted in the unit and how he was going to, you know, integrate or use it in the lecture,
> [Level III female Sports & Exercise Science]

Also proposed to questionnaire respondents was the statement *being involved in practical activities/ fieldwork based on research/ consultancy projects*. A quarter of all respondents recognised (24%) this statement. The compelling figures in this respect are the 43% of Leisure, Tourism, Hospitality & Sport respondents and 9% of Business School respondents who agree, as well as undergraduates claiming more experience than postgraduates (26% - 16%). An undergraduate example from the discussion groups follows:

> **14** The trouble is a lot of the time you're just sort of replicating other things. I mean last year we looked at the [*name of forest*], the effect of conifers on

> soil. That was actually quite interesting, we had practical skills; but of course the work had been done five years before, ten years before, fifteen years before: whereas of course we could have actually researched something that hadn't been looked at perhaps so much. Whereas that was known, we were just doing someone else's work to see if we could reproduce someone else's work. Why? Surely we could have done something new, or at least newer, something a bit more up to date.
> [Level III male, Environmental Policy & Management]

Although the topic does not arise much in the discussion groups and cannot be illustrated or substantiated that way, the hypothesis about differences between disciplinary areas is strengthened here. When taken together with the finding from the Likert scale question that 47% of all respondents agree that *the most effective teaching is when the lecturer involves us in aspects of the research/ consultancy process (e.g. a problem solving exercise, or writing a research/ consultancy bid or paper)* a case can be made for promoting this approach to teaching to academic staff. Only 10% of respondents disagreed with the statement above and there is little difference across the disciplinary groupings – save the anomaly that although 42% of Leisure, Tourism, Hospitality & Sport agree, a total of 19% do not. If they are exposed more to research and consultancy in their programme, as figures elsewhere would suggest, it may be that they do not feel satisfied with the learning that has taken place as a result or consider that they receive sufficient exposure to aspects of research and consultancy already: 29% only agree that *insufficient attention is given in the subject(s) I study to developing our research/ consultancy skills*, a smaller figure than for the other two disciplinary groupings.

An illustration of how one student from Leisure, Tourism, Hospitality & Sport felt she could have been better supported during her research experience follows:

> **15** No, the thing is it would also help our own. I mean, like, I've been out to [*name of 1st country*] to do my dissertation research and [*name of friend*] has been out to [*name of 2nd country*], and it would be crying out for if there was somebody that you could approach who could help with you things that you might, you know, working out in a country, that you might come across. And we know that there have been... I know that [*name of tutor*] has done research out in [*name of 3rd country*] and things like that.
> [Level III female, Sports & Exercise Science]

Finally, an example of a linkage between staff and student that is not fully realised is included here: it shows how what is lacking in students' appreciation of their course is sometimes broader understanding, the bigger picture. Perhaps too this was an opportunity for the member of staff to explain better how her occupation at that time fitted in with the rest of her commitments, and, specifically, with the students' learning experiences.

> **16** [*Name of lecturer*], might have been writing her book for the last year, you're going round, she's on the 'phone to her publisher. Using us as a focus group: we went in there for a meeting and she asked whether these words made any sense and did we understand these terms, because she probably reckoned they were too complicated to be defined...
>
> Me: That's involvement in research, isn't it?
>
> Well, I suppose it is.
> [Level III male, Environmental Policy & Management]

Finally, an extract is included that shows how students do not necessarily welcome innovative teaching methods related to research and consultancy. It also reminds the academic teacher that students are often concerned above all else with the preparation they receive for examinations and evaluations.

> **17** Group work, we've just completed a module that... I believe [*name of lecturer*] has been pioneering... some sort of research where... sort of the way groups interact and what have you, and I think as a by-product of our module we've had to complete journals that haven't been... that are not worth anything in terms of marks, but if you don't hand it in then you can lose marks. So it's quite a clever way of us contributing as students, and so I presume that this is clever, very clever. So I presume that some sort of work, or some sort of research... or it's contributing to some form of research.
> [Level III female mature student, Geography]

4.4.3 Active engagement with research or consultancy publications

A third finding of this analysis is the extent to which participants are aware of published research. 40% of all respondents had *read a research/ consultancy paper or report written by a member of staff.* This was a notable feature particularly of the Leisure, Tourism, Hospitality & Sport grouping, of whom more than half recognised the statement (54%). Business School students were least

likely to have read staff publications (35%). All the same, discussion group participants who had read staff publications were not always aware of the process by which they were conceived and validated by appropriate bodies:

> **18** I mean, apart from things like my dissertation tutor's been writing a book, which I know about, but I don't really know... it wasn't... and it's only because she was interested in something that I was interested in that I knew she was writing a book, but there's no kind of... wider kind of publicity that there is research going on and what people are doing. I've got a book by [*name of lecturer*] about the...
>
> Yeah, I've got [*name of lecturer*]'s book!
> [both Level III females, Sports & Exercise Science]

> **19** Well he edits a whole series of books as well as like, I think called [*name of series*] or something aren't they, the whole series he edits, so that must be, he just gets loads of articles and decides what goes in the books I presume that's what it is.
>
> I presume he has to write an editorial in each book, things like that, whereas I think [*male lecturer*] does more – goes out and researches sort of dissertation-type stuff.
> [Both Level III females, Sports & Exercise Science]

> **20** In the major British journals there are like - which I read just anyway, not just for projects - quite a lot of our lecturers have contributed to that, And then there's another publication that is created totally by the College, So... I've come across that quite a lot.
> [Postgraduate female, Landscape Architecture]

These three extracts are representative of the sort of involvement that students might have with their lecturers' published work. The postgraduate student is the only one to admit to having read the publication in question, and she offers knowledge of the journals relevant to her discipline. This familiarity with and use of this type of research output is not seen in the other two cases, where the participants go little beyond basic awareness.

4.4.4 *Contrasting active experiences of research or consultancy as templates for practice*

Finally, there are a number of extracts illustrating students' active engagement with research and consultancy at the University, which because positive or negative in nature, provide evidence of what sort of active experience students would welcome. Some examples from the text box in the questionnaire (two from Leisure, Tourism, Hospitality & Sport respondents):

> **21** There seem to be a large number of lecturers with a wealth of interesting and informative knowledge, but either because of the system or because of the lack of time never get to fully impart this information down to us fully. I feel this is a very important way of learning that we as students are missing out on. We should be having more of this type of workshop or lecture, rather than those solely based on academic textbooks.
> [Level III female, Marketing & Tourism Management]

> **22** Allowing lecturers to bring in their outside knowledge of specific organisations does give an increased awareness of how that module relates to the working environment. It also gives increased respect for a lecturer, to take their views more seriously and their advice.
> [Level III male, Hospitality & Human Resource Management]

If these are the sorts of active experience that the University wants to encourage amongst students then the final extract serves as a template for a common student experience that can easily be avoided.

> **23** M: I don't think lecturers would really want undergraduates to be... involved in their research because I don't think we're really perceived as having the skills...
>
> F2: No, when we went to [*name of country*] with [*name of lecturer*], and she tried to get people involved in that, but I think that was just mainly because of lack of time rather than anything else.
>
> F1: I think she just needed some research assistants, I don't think it was actually explained –
>
> F2: No... what it was for...
>
> F1: - you know, her purpose, the main sort of thing, it was just somebody to help gather the information, which is a real shame, because I think a student, you know, would probably... would have been very interested...

M: I think the whole question on all these subjects, is, 'Does a professor, does a doctor, want to include undergraduates of less ability than research students, in the project. Can he depend on undergraduates, and I think they'd have to pick and choose some undergraduates.
[Two Level III females, Sports & Exercise Science;
Level III male mature student, Business Management and Politics]

4.5 Summary of active experiences

The principal findings from this section of the analysis are the following:

- Student involvement with research or consultancy does not generally take place outside of scheduled opportunities within the curriculum, lectures for example;

- Postgraduates have received more research training than undergraduates;

- Fieldwork is undertaken by Leisure, Tourism, Hospitality & Sport students more than those from the Business School;

- Students in the Business School claim little active experience of any sort; the Leisure, Tourism, Hospitality & Sport students and those from the 'Other' disciplines have relatively more;

- Postgraduates offer a more rounded understanding of how research and consultancy fit in to their studies and are more positive about the benefits of research-active staff (including their availability) then undergraduates.

Chapter Five Positive and negative experiences and views of research and consultancy

5.1 Introduction

> I just like finding out things and learning. Because I'm just nosy and like to know what everyone's doing!
> [Level III female, Sports & Exercise Science]

This results chapter presents the findings displaying the positive and negative effects of (staff) research and consultancy as identified by student participants. This treatment of the results follows previous work acknowledging the benefits of integrating teaching and research, both for academic staff and for students (Clark, 1997; Colbeck, 1998; Willis and Harper, 1999 *inter alia*) as well as some of the disadvantages that students in particular have identified.

This polarity in the presentation reflects the way that the data was gathered [see Appendices 2 and 4], allowing students to recount positive and negative learning experiences while asking them to consider how research or consultancy activity may have played a part in shaping these experiences. It also allows for the same terms of analysis as in previous student-centred research into the research-teaching nexus, where, for example it is seen that, 'Overall, a greater number of positive than negative effects were identified, and positive effects were referred to with much greater frequency' (Lindsay *et al*, 2002).

Given that student awareness and understanding of research and consultancy activities is not always fully developed (Woodhouse, 1998) it is also important that the analysis attempt to ascertain which negative views are properly due to the effects of research and consultancy and which ones arise in other circumstances.

The findings are presented as they relate to the main themes encountered through analysis of the student experience questionnaire and small-group discussion transcripts.

5.2 Positive experiences and views of research and consultancy

5.2.1 Awareness of benefits in general/ overview of type of positive effects identified by students

The bedrock of this analysis is set in place by the questionnaire when asking whether respondents were ***not*** *aware of the benefits that the involvement of staff in their subject area(s) in research and consultancy give me as student.* Whilst both undergraduate and postgraduate students in the main disagreed with the statement, the postgraduate sample recorded only 18% in favour compared to 32% of the undergraduate sample. This immediately suggests more awareness of benefits amongst postgraduates then undergraduates.

A further finding from this question is that half of the students from the Business School disciplinary grouping (49%) agreed that they were not aware of the benefits compared to only 24% from Leisure, Tourism, Hospitality & Sport and 18% from 'Other'. The hypothesis that students from the Business School are not likely to be as aware of the positive aspects of research and consultancy as their counterparts from other disciplinary areas finds further illustration in the discussion group extracts, as will be seen throughout this analysis.

Discussion group participants were good at identifying benefits to themselves from staff research/ consultancy. All five groups provided examples of how they felt they might profit in this environment. A basic statement of this sort serves well to summarise one common point of view:

> **1** In that you know, they're obviously developing themselves, developing research, and we are the ones who will benefit from their knowledge – [Level III female, Geography]

The same participant goes on to elaborate on this idea later and covers several key hypotheses in doing so:

> **2** Just the fact that I think it can benefit students, because obviously a bit of their developing research, you know, it filters down doesn't it, and also I think it builds up the institution as well, you know, in terms of we have gone from, you know, a college of further [*sic*] education to a university. [Level III female, Geography]

These two extracts, both from a Leisure, Tourism, Hospitality & Sport student, contain all the principal positive effects that students identify in the small-group discussions. They serve as a starting point for this analysis and show how students formulate their thoughts on the question of linking teaching and research. That is to say, the question is often addressed at once from several angles without the explicit understanding of university organisation that would clarify what place and value research holds in their institution.

5.2.2 Enthusiasm, motivation and helpfulness

The key finding from this section is the extent to which students look to those conducting the research or consultancy in their institution for ways into the academic community of which they are at best, peripheral members. This point picks up the remark that:

> 'We can describe the human transactions between students and staff that constitute the processes of higher education without mentioning "the academic community"' Barnett (1992: 629).

Participants readily identify desirable aspects of teaching practice in general, and foremost amongst these is enthusiasm on the part of the teacher. Engendering enthusiasm for the subject in students is also a valued part of the academic teacher's role and can be the most tangible link between research and teaching for students.

> 'Professors are more than ever aware that involvement in research activity can increase the general motivation of undergraduates to learn as well as stimulate their interest in specific subjects' (Clark, 1997: 251).

Just under half, 42%, of respondents to the questionnaire felt that their *interest and enthusiasm had been stimulated by their research/ consultancy-active teaching staff.*

This figure is marginally greater amongst postgraduates than undergraduates (48% and 41% respectively) but the most striking differences are once more seen

between the Business School respondents (32%) and those from the Leisure, Tourism, Hospitality & Sport grouping (51%) and 'Other' disciplines (65%).

This is illustrated by comments from the questionnaire, where Business and Computing participants knew little about their staff research/ consultancy interests and certainly had not been motivated by research-active teaching staff:

> **3** It seems quite low key. But would have been interested if asked.
> [Level III male, Computing with Business Computing Systems]
>
> **4** On two occasions, different lecturers have suggested that lecturers would rather conduct research than lecture. I do not consider I know anything about any of my lecturers' research.
> [Level III female, Business Management with Psychology]

Several points developed in the group discussions lend support to the idea that lecturers can stimulate enthusiasm through their research or consultancy activities.

> **5** Some areas i.e. management, had no understanding before modules were undertaken - more enthusiastic they are, the more it motivates me.
> [Level III student, Tourism Management & Marketing]
>
> **6** Just their enthusiasm to explore an area of study which encourages me to do extra research/ learning outside of modules too.
> [Level III female, Theology & Sociology]
>
> **7** Made me more interested because of the tutor's enthusiasm.
> [Level III female, Tourism Management & Business Management]
>
> **8** 2: And also you would presume that it would make your lecturers far more enthusiastic about what they're doing, and also they can bring their own examples rather than making dry lectures by just, you know, "Such-and-such says such-and-such in 1989" or something.
>
> 1: That's right, yeah.
>
> 2: Making it far more real, can't you? [sic]
> [Both Level III female mature students, Geography]

For the most part there is little sense in the group discussions of enthusiasm for the subject being *necessarily* attributed to research and consultancy, but

enthusiasm is stressed as a vital attribute for the lecturer and the quality of the lecturer's performance in class is associated with this.

When linked to discussion about the dissertation students often express the wish that they had known more about teaching staff's research or consultancy activities and enthusiasms in order to make their own choice of topic.

However, comments are included in the questionnaire showing that a positive and motivational relationship can take place during the dissertation period:

> **9** Because then [*if student knows lecturers' research interests*] you can do topics that they're interested in, so they're going to enjoy it and the student's going to enjoy it because they can get a lot of feedback on it.
> [Level III female, Sports & Exercise Science]

> **10** I think I've been very lucky in that I've even had my dissertation supervisor's home phone number should I need to talk to her about it, and I really valued having that level of interest from the supervisor.
> [Level III male mature student, Business Management and Politics]

> **11** Discussed my dissertation/ thesis with a PhD lecturer who gave me more confidence about my original idea + made me realise some future possibilities I had not thought about.
> [Level III male, Computing & Business Computing Systems]

The beneficial links realised between students and staff in the Business School in two of the above extracts show that disciplinary culture does not prevent positive research effects on teaching and learning. Nonetheless, these are isolated examples.

While it is hoped that teaching staff manage to stimulate enthusiasm in their students it is also the case that their own teaching may be improved, or at least made more dynamic, by their research or consultancy activities. This was a topic that excited a great deal of debate in the group discussions. First however it was tested in the questionnaire, and it was found that over half of respondents (51% overall) felt that *research or consultancy involvement made staff more enthusiastic about teaching*.

It was again postgraduates who felt more strongly about this (65% agreed) than undergraduates (48%), likewise Leisure, Tourism, Hospitality & Sport respondents (61%) were more likely to agree than the other two disciplinary groupings (give figures).

A fresh view on how the teaching – research nexus might bring advantages for staff and students is provided by a mature student from the Business School:

> **12** I think actually, I agree with that [*linking teaching and research/ consultancy*] wholeheartedly, because I think the lecturers who are doing the research are the ones who are getting on in their careers. The more research they do and the better quality the research, the more likely they are to be promoted, and they seem to be the ones who are more enthusiastic about their own careers rather than the ones who aren't doing any research.
> [Level III male mature student, Business Management & Politics]

This extract makes reference to the wider interests that a member of academic staff might be expected to have at the University, and it is clear that this student feels that engaging with research or consultancy is a necessary part of the dynamic that advances the aptitudes and careers of academic staff. It is important to note that he does not esteem research or consultancy more highly than teaching but rather considers that they form, together, a whole that benefits both staff and students. But he does imply that teaching-only staff may not be in a position to provide students with all they need.

Alongside beliefs about the benefits of enthusiastic lecturing several participants were also able to report instances where they had found particular members of staff helpful, often in connection with dissertation work. They then tried to make the link between this and their research or consultancy interests:

> **13** It was obviously good that she could put me in touch with somebody to do my dissertation with, and she did know what obviously I was doing, so perhaps she could suggest research and stuff.
> [Level III female, Sports & Exercise Science]

> **14** I think some of them do it [*maintain balance between teaching and research/ consultancy*] very well and some of them do it very badly, like [male lecturer] for example. You can pretty much always see him, if you

> email him he'll respond to you almost immediately, he'll read your work, he'll give you help, and yet you know he's doing research at the same time. [Level III female, Sports & Exercise Science]

The helpfulness of lecturers and tutors, particularly during the dissertation period, was, along with their availability to students during this time (see 5.3 below), the biggest issue in students' minds. This meant that although benefits from staff research and consultancy were identified, they were treated as secondary concerns compared with quality contact time and working effectively for dissertations and exams. Students consistently foregrounded these issues throughout the discussion groups.

5.2.3. Up-to-dateness, respect and desire for guidance

The second main finding of the research is also related closely to students' relationships with members of their academic subject staff. Students put themselves in the position of learners who need certain things from those appointed to teach them, and this priority meant that research or consultancy activity was commended as it led to:

- More and more up-to-date knowledge on the part of teachers;
- More prestige and respect for the member of staff and those associated with her;
- The desire to learn from and emulate someone in an eminent position.

A remark is offered in the questionnaire in support of the first two of these points:

> **15** Allowing lectures to bring in their outside knowledge of specific organisations does give an increased awareness of how that module relates to the working environment. It also gives increased respect for a lecturer, to take their views more seriously and their advice. [Level III male, Hospitality Management & Human Resource Management]

The desirability of lecturers' being up-to-date was also raised many times in the group discussions, sometimes in relation to student research (the dissertation):

16 Dissertation tutor has up-to-date qualifications + research material in chosen topic, which enabled me to gain greater understanding in the subject area.
[Level III female, Tourism Management & Marketing Management]

17 Oh no, there's no doubt whatsoever that doing research is far better for us because they know everything, they understand everything and, like, they know the people that have written other research as well. They're like, "Oh yeah, my friend so-and-so who's this real, high-up lecturer."
[Level III female, Sports & Exercise Science]

18 Anyway, one of our teachers works for them, and he's told us about some of the work he's done, and it's been relevant to modules I've been doing so I've learned about things not only through doing... you know, doing the module.
[Postgraduate female, Landscape Architecture]

The nature of the academic relationship between students and staff, the third benefit mentioned above, is referred to explicitly in one group where the single example of a student adopting a self-modelling approach with respect to his lecturers appears:

19 I think research almost sets the standard. You go to university and you want to... at the end of the course to be at a standard similar to... well, not similar to your lecturer but a real high standard, then if he includes his research and says, "Right, this is my paper", or includes you in his research then he teaches you the standard at which he operates, and so you always know where you are.
[Level III male, Geography]

20 I think it does act as a catalyst for a student as well. If you know your lecturer is going to be doing research or your advisor is doing research, then obviously you want to know as much information about this particular research subject just so as you don't look stupid in exams or in a test! Because obviously your lecturer is going to know everything about this subject he'll be researching in.
[Level III male, Geography]

This is perhaps the type of student who would in any case be drawn to academic research or consultancy: that is to say he considers actively the roles of a member of staff and the way he conceives knowledge in order to adopt an appropriate learning strategy himself. His discussion group also begins to construct its own

understanding of the teaching - research nexus, emphasising the positives associated with the process:

> **21** F1: Yeah, I mean, I think they [*lecturers*] need to share it [*their research/consultancy*] with us.
>
> F2: Yeah.
>
> M: I think they need to just so that the subject they're teaching is constantly evolving.
>
> F2: Yes, definitely, yeah. So it hasn't just remained static.
> [All Level III Geography: 2 female mature students, 1 male]

This extract offers an insightful angle on the value of the currency of teaching staff's knowledge, suggesting that sharing through teaching helps the subject to evolve. People who have both functions are on their account likely to benefit both themselves and students, though there is no consideration of the intrinsic value of the research itself. The group goes on to consider this in more detail:

> **22** Yeah, I mean [*name of lecturer*] is a terrific example of that. He's always researching his subject, because [*name of subject*] is quite a new discipline within Geography, it's constantly evolving and you need lecturers with that know-how to actually teach you how.
> [Level III male, Geography]

So the evolution of the subject is seen to depend on its being taught by research-active staff, at the same time as this evolution requires staff to keep up-to-date through research. This view places students squarely in the cycle of research, learning and teaching and suggests that they and the teaching they require are inseparable from the research efforts of the subject area.

Doubts about the likelihood of these benefits being realised are expressed by a participant who feels that the scheduled contact time between students and lecturers might not be enough:

> **23** If the point of having lecturers is for them to pass on their knowledge, then I don't think that can be done all in a proper lecture time. I think you do need tutorials. Because there might be specific questions that you either didn't understand or which you need to know and you might feel too embarrassed to use up the time in the lecture to put your hand up.
> [Postgraduate female, Landscape Architecture]

That is to say, whether research and consultancy inform the course content or not, students sometimes need different learning environments and relationships: here it seems that the student wanted more chance to work out her problems one-to-one.

This returns the discussion to the 45% of respondents who agree that they have *learned most when undertaking their own project or dissertation* and the 47% who appreciate *being involved in aspects of the research/ consultancy process (e.g. a problem solving exercise)*. This second is particularly welcomed with only 10% overall disagreeing and 56% of students from 'Other' disciplines showing most agreement.

The focus on inquiry through problem-based learning, where students are exposed to parts of the research process, is welcomed by participants where it was recognised as such. This fits with the view that higher education is about awakening a 'sense of enquiry and a related research enlightenment' (Clark, 1997: 253).

5.2.4 Improvements in skills or understanding of subject

For every category of respondent the most recognised benefit from research or consultancy identified from their time at the University is *increased understanding of the subject* (overall 52%). This is strongest amongst Leisure, Tourism, Hospitality & Sport respondents (59%) and lowest amongst Business School respondents (46%). This again points to a disconnection between students from the Business School and research and consultancy, and a more powerfully realised linkage for students from Leisure, Tourism, Hospitality & Sport.

It was seen in section 4.4 that students did not feel that they had received sufficient research methods training. The discussion groups offered little to suggest that students recognised how lectures might be structured so as to mirror, or inculcate, the research process. Similarly the figure for *contributing to the development of my research/ consultancy-related skills* is fairly low, at 31% overall and only 22% in the case of the Business School (33% Leisure, Tourism, Hospitality & Sport).

The extracts included in this coding category do not give evidence of much differentiation between better teachers and better classes or course materials in students' appraisals of their learning experiences as shaped by research or consultancy.

> **24** The ones that are still researching are... don't teach a lecture, or each year that they do if they lecture they use new stuff, most of it isn't it, as opposed to the ones that learnt all theirs twenty years ago
> [Postgraduate female, Landscape Architecture]

This distinction between research-active and non research-active teaching staff appeals to the foundational notion that the content of research feeds more or less directly into course material, a benefit of research or consultancy that was rarely singled out by students *per se*. Students did not separate the research done from the teaching staff involved in producing it and so tended naturally to locate the nexus in individual staff members:

> **25** 1: He's [*lecturer*] kind of... he... he's almost...
>
> 2: Teaching us.
>
> 1: Teaching it, yeah, he's teaching it to you more than just reading out pieces of research that some of the lecturers are interested in, and actually gearing us towards the assignments and the exams –
>
> 2: Yeah.
> [Both Level III Sports & Exercise Science]

This suggests that the two students were keenly aware of the evaluation they were going to undergo and concerned that this should be made a priority. The positive appraisal of the lecturer in question followed on from the same participants' suggesting he was generally more enthusiastic and effective because an active researcher, although the comment in the third line above ('just reading out pieces of research that some of the lecturers are interested in') places research integration into teaching classes in arguably a less favourable light.

The low figures from the questionnaire cited above suggest that students do not generally recognise research and consultancy training in their curriculum, if indeed they are being successfully integrated at present. A hypothesis arrived at from

immersion in, and interpretation of, the discussion group data is that different pedagogic strategies are recognised by students when used in lectures and classes, and that in these cases they are quick to link such methods with beliefs about the member of academic staff's research or consultancy interests.

The following extracts make allusion to the inclusion of research or consultancy within the lecture:

> **26** 1: Well, that's not necessarily [*sic*] actually involve them [*students*] with the actual research, you know, going out in the field and stuff, but actually including it within their lectures... I think that's probably the point.
>
> Me: You don't necessarily need to be actually doing their research for them: that's a good point.
>
> 2: Yeah, just like including it within [*the lecture*]
>
> 1: Absolutely, it's just being aware of [*it*].
> [Both Level III female mature Geography students]

> **27** Well, I think it's terribly important from a teaching point of view that they know what they're talking about, they're up to date with what the research is and what people are saying about the subject, and they're making a contribution to that. It can only enhance teaching.
> [Level III male mature student, Business Management & Politics]

> **28** Oh yes, the course was based on his book. He had obviously written the book and then based the course on it. So, yes, I think it probably was useful.
> [Level III male, Environmental Policy & Management]

> **29** All my lectures are discussion-based. We had a seminar built into a lecture, with work to prepare and we invariably present our work to the other students.
> [Level III female mature student, Geography]

Little reflection on how lectures might better incorporate research or consultancy elements takes place beyond the scope of the remarks quoted here. The only recognition of research informing the structure of the class here comes from a mature student.

This indicates that students are not in general accustomed to evaluating their teaching according to these criteria: they were quite willing all the same to say what they found helpful or otherwise in lecturing in more general terms. Similar reasoning explains the lack of positive remarks pertaining to an *increased awareness of methodological issues.* This topic is fairly well supported in the questionnaire, with 41% of respondents recognising the statement. The figure remains largely unchanged across the different groupings but postgraduates present the exception: 64% feel that research/ consultancy-active subject staff have helped them understand methodological issues. A remark provided in the questionnaire explains this for one taught postgraduate:

> **30** This survey depends upon which modules you have studied so far. If I had not just completed a module in Methods of Enquiry my responses would have been far more negative through lack of knowledge of what does go on at Uni.
> [Postgraduate male mature student, Educational Leadership]

There are several comments offered in the questionnaire supporting the 41% figure who have an increased awareness of methodological issues:

> **31** Throughout university, the lecturers have always been extremely helpful and have encouraged my ability to critically analyse and research information.
> [Level III male, Religious Studies & Theology]

> **32** During research methods module they discussed difficulties in their own research + how to overcome them. Helps you to realise research does not always go as you want it to.
> [Postgraduate female, Sports Development]

> **33** Has aided me in research process of dissertation.
> [Level III female, Marketing Management & Tourism Management]

5.2.5 Positives identified despite lack of involvement

One issue that can be addressed at this stage is that of actual student participation leading to positive learning experiences. While this is covered to some degree in Chapter Four there is a telling nuance made in some of the extracts collected

under the coding category *Benefit for student's own work or employment*, namely, the distinction between dissatisfied participants who acknowledge benefits while feeling they had not received them and those participants who took an active interest and profited fully from the research or consultancy going on. Such involvement may come about through a good tutor - student relationship or as a feature of the course, eventualities that are depicted in the discussion group extracts included here.

> **34** [*my question: is it positive that your teachers gain esteem through their research as well?*]
>
> No, as long as it doesn't affect me and my studies, it's good that they're, like, so highly valued.
> [Level III female, Sports & Exercise Science]

> **35** I don't know if I actually recognise it in the tutors because they're doing research, but I can see how the theory would work because if you're constantly learning then you're... I mean if you're spending time learning you're going to be enthusiastic about it, and the more enthusiastic you are the more you're going to try and learn. Because I find myself in summer, when I'm not actually doing any modules, I find I forget stuff. And if they're always trying to better their knowledge then they're going to be more useful to you because they're up to date I suppose and they know what's going on.
> [Postgraduate female, Landscape Architecture]

> **36** Yes, this is it. I mean, say if you've got a report which is sort of fifty pages, you know, you can take that into an interview with you, and say, "Well, this is, you know, here's the degree certificate and this is what I can do. But I think some of the things would also be enjoyable to do, and if you get paid for it as well! But there just wasn't the option there.
> [Level III male, Computing]

This final extract relates particularly, and positively, to consultancy but reveals that the participant had not in fact enjoyed the benefits he identifies.

In short, some discussion group participants felt they had not received the benefits they recognised in the teaching-research nexus and some participants felt they had, but most had notions of how the benefits were supposed to be passed on to them.

5.2.6 *Additional benefits to students of research and consultancy*

Some other positive effects of the teaching-research/ consultancy nexus are addressed in the questionnaire but not subsequently illustrated in the discussion groups. Notable among these is the 10% overall who agree that they have been *motivated to consider postgraduate research in the same area.* There is one significant variation within the level and disciplinary groupings for these figures, where 19% of those from the 'Other' disciplines had considered postgraduate research.

Finally, some topics occur in the discussion groups which were not proposed in the questionnaire. Students identified the following benefits:

- Directly advantaging own academic work or instrumental for future employment;
- Improved links with those outside the University;
- Improving the status and quality of the University.

> **37** Well, you still just have the one dissertation supervisor, but you knew that, well, I certainly knew that they knew exactly what they were looking for, and the book had been written based on the experiences in this university. So they'd written a book based on the experiences in this university, they're asking you to do the dissertation, in this university, therefore, read the book and it tells you how to do it. Broadly speaking. [Level III male mature student, Business Management & Politics]

This example of in-house published research has evidently been extremely beneficial to the student in question although it suggests a highly pragmatic approach to learning. Working with the authors of the book is likely to be valuable to this Business student in several ways, one of which is sketched out below:

> **38** And another thing that I probably meant to mention is that if you do research, and you're working with other companies, I suppose there's a good chance of getting employment with those companies at the end of the day, which is doubly good for the students and doubly good for the University as well, because students are going through the actual University and they're successful, that sort of thing. If they go high up in a company through that, then they're aware of where they came from...
> [Level III male, Computing]

This quotation encapsulates the attitude that students in some applied fields might hold towards consultancy in particular. The participant is aware of the multi-layered relationship between knowledge providers and consumers and how he might pass between roles in later life. Indeed, referring to the generic skills that modern employers look for in graduate students, and in particular the process of inquiry, Woodhouse (1998) comments that, 'A positive linking of teaching and research has the potential for providing an education that is more durable as well as more in demand by employers' (Woodhouse, 1998: 45). This is seen again below when a student considers his original reasons for attending the University. As university courses attempt to respond to the needs of a changing job market the following quotation might be expected to become more representative still:

> **39** The [*name of research unit*] was quite important for me because I was doing rural planning, and that's very, very prestigious now in Great Britain, well, probably beyond Great Britain, for its research. Obviously, if it's got so much prestige then obviously if you want to work in that field, and they can link you with this department, then it's going to be very beneficial to us.
> [Level III male, Geography]

His concern with the status of the research unit is precisely the attitude that the student as customer may increasingly develop in order to make the best of the time at university, although it is not broached overtly anywhere else in the data.

There is just one instance of students addressing the financial benefits of research and consultancy to the University:

> **40** But certainly by the time you get up to Masters' and doctoral level it [*quality of research & consultancy*] seems to make quite a big difference, that sort of thing, and I think it's an important thing. And it does affect the money that comes in.
> [Level III male mature student, Business Management & Politics]

Alongside this realisation of the academic benefits of research and consultancy activity to postgraduate students the participant identifies clearly one practical consideration for undertaking research within the University. The fact that financial considerations do not play a role otherwise in the focus groups demonstrates a lack of cynicism on the part of participants, but also often a relatively self-centred

approach to university life. This in turn shows the importance of soliciting the views of students, since they are at once the *raison d'etre* of the university and sometimes themselves future teachers and researchers.

5.3 Summary of positive experiences and views

In general it is shown in this section that:

- Students identify a variety of benefits from research and consultancy, mostly for themselves;
- Students are concerned mainly that teachers should be motivated and motivating, up-to-date and helpful, but there is awareness of how research can enhance lecture content and provide links with the outside world (like consultancy);
- Students from the 'Other' disciplines are considerably more motivated by research-active staff (65%) than those from the Business School (32%) or Leisure, Tourism, Hospitality & Sport (51%). Both Leisure, Tourism, Hospitality & Sport and 'Other' students feel to the same degree that staff themselves can be motivated by research or consultancy (61% and 59%) respectively. Postgraduates feel this most of all (65%);
- Students from the school of Leisure, Tourism, Hospitality & Sport are more positive about research and consultancy than those from the Business School and postgraduates or mature students are more aware of the potential of research and consultancy to shape positively student learning experiences than are undergraduates;
- Postgraduates gain more understanding of research methodology than do undergraduates;
- Students do not all have the same access to research or consultancy involvement but even those who did not sometimes felt strongly that it would have brought benefits.

5.4 Negative experiences and views of research and consultancy

5.4.1 Availability of academic subject staff

One opportunity for students to comment on what they had not appreciated in their learning experiences was the student experience questionnaire. What is immediately obvious from the results is how small the figures are compared to those from other questions. The statement that drew the highest level of response, *lack of availability of those staff to see me*, found only 15% overall of the sample agreeing with the statement.

Whilst the numbers of students responding are not as high as in other questions there is still considerable variation between the groupings of respondent: 23% of Leisure, Tourism, Hospitality & Sport respondents agree with the statement compared to only 10% of those from the Business School grouping. This finding seems to run counter to the prevailing sense from previous questions and discussion group extracts that the Business School students have least knowledge of and contact with research, but this is open to interpretation. It may be that Business School students expect less from their tutors than students from other disciplines and are consequently less concerned by their lack of availability, or that staff availability is genuinely less of a problem in the Business School.

Another surprising finding from this question is the difference between male and female respondents: 22% of female respondents consider this to be a problem against 7% of males. This points to a possible gender difference in approaches to self-directed learning. Gender differences in conceptions of the teaching-research/ consultancy nexus provide subject matter for further study however: this finding suggests one possible direction it could take.

Certainly undergraduates are more aware of tutor absence for reasons of research or consultancy than postgraduates (15% against 10%) and a possible conclusion in this second case is that they feel the need to see their subject staff more keenly than postgraduates do, whether for academic guidance or simply reassurance. The figure of 39% of postgraduates who agree that research-active staff in fact *spend more time helping students* (31% undergraduate) adds further support to this.

It is likewise in the group discussions, where the most compelling immediate finding is the extent to which participants felt they could be getting more out of their relationship with lecturers and tutors if only they were more available to students. Some example comments show what form this dissatisfaction took:

> **1** But other times when they're in their offices, but still can't see you because they're doing other things, if you need something doing, you go and see them and they're like, "Quick, quick, you've got thirty seconds." [Level III male, Environmental Management & Policy]

> **2** I find there are problems with only a few tutors but it's important for us because we have to have regular tutorials and some of them have like, other commitments, either research or they're part-time and they've got like, commitments and that has been a problem in the past. [Postgraduate female, Landscape Architecture]

In accordance with the findings from the questionnaire and the weight of evidence that came from the discussion groups, staff availability is one of the principal issues in this section.

5.4.2 Availability and communication between academic staff and students

It is profitable to look at the issue of availability together with student observations on problems with communication with staff. This helps form a fuller picture of how students in the University conceive their academic and personal relationships with staff. In general, though there is a great deal of dissatisfaction with the unavailability of academic staff, this needs to be balanced with the realisations expressed elsewhere that teaching staff have other responsibilities as well:

> **3** Yes, it can be a struggle to get real sensible help, particularly when you're not entirely sure what you want. If you ask the right question, they will give you the right information. If you're not sure what the question is then you have a real problem at times, in actually getting hold of information. [Level III male mature student, Business Management & Politics]

This remark occupies a central place in an understanding of what students want from staff. This participant offers a consistently informed and appreciative account of his experiences of research and consultancy, but here admits that it can be difficult to form a beneficial relationship with staff 'if you're not sure what the

question is.' This is revealing as it suggests that students might see their subject staff as more than merely conveyors of information or evaluators of work. Why, after all, might a student go to see a lecturer or tutor without any particular question in mind?

The reply to the remark quoted above reinforces the original reservations and draws together issues of availability and communication:

> **4** F1:I find it very difficult getting anything out of anybody! Whether you've got the right question or not, nobody's prepared to help in the slightest!
>
> F2: I agree. And getting hold of people, the whole lot. Getting hold of them, getting the information you want.
> [Both Level III females, Sports & Exercise Science]

As seen throughout this chapter a strong undercurrent of opinion in the discussion groups held that the dissertation period of the final year, as well as introducing research to the student, was a time when relationships with the subject staff became extremely important:

> **5** And you know, the last couple of months you do need your tutor, just to advise you through the final steps: if there's a problem it's important at that stage of the process.
> [Level III male mature student, Business Management & Politics]

The inclusion of these extracts displays an agreement on a core problem that is addressed throughout this section; that is, the difficulty in using tutors to best advantage and maintaining productive relationships.

It is clear that there is little to commend in communications between staff and students which leave students waiting for forgotten appointments, or vice versa. This is raised a few times during the group discussions, e.g.:

> **6** Yeah, even when we actually arranged meetings, he [*tutor*] just didn't turn up.
> [Level III female Geography]

7 Whereas the lecturer who you actually need won't even give you five minutes, and when you do actually make an appointment with him to go and see him and you turn up, he rushes you so much that, like, you forget what you want to ask him in the first place because he's so scary and rushes you through everything.
[Level III female, Sports & Exercise Science]

8 2: Erm, sometimes they can be quite hard to get hold of, you know, one particular person is good on that subject, it can be quite hard to get hold of them at certain times, or on occasions they can defer it to someone else, which is, if it takes you a week to get hold of them, and "Ah, it's not really my topic..."

1: And you get pushed around...

2: Play email tag, backward and forward between five different people.
[Level III males, Computing and Environmental Management and Policy]

9 Well if you know that they've told you they're doing something and they're only teaching that one module, a term or something, two modules; they're like, 'Oh, I'm only available Mondays and Tuesdays' and stuff like that, and you go to their office and they're sometimes not there. So you can't see them. So yeah, availability is a problem.
[Level III female, English & History]

10 And 5 weeks she [*dissertation tutor*] just disappeared, like over Easter, and it had to be in 4 weeks after Easter, so it was like the most critical time, and then yeah, it's the 2 weeks that she has off over Easter, so she had those 2 weeks and then disappeared for 5 weeks afterwards, and like, that was it.
[Level III female, Sports & Exercise Science]

On the other hand, participants also revealed that they did not always themselves understand the administrative structure of the University in their remarks:

11 I don't like it, I don't agree with it and I don't understand why they're not available. I don't know how they're employed, on the basis of whether they just have to be available for the lecture or whether...
[Level III female, Computing]

12 And then they say, 'Oh, I'm sorry I haven't got round to reading yours but I've had forty to do this week.' And you say, 'Well, I've got three essays to do, what do you think I think is most important at the moment?' I kind of find it hard to relate to that.
[Level III female, Computing]

Problems evidenced by remarks such as those above are not necessarily to be solved by making teaching staff less research-active however. Better communication of what staff roles entail would prevent the sort of breakdown in understanding seen here.

Issues of communication with and availability of academic subject staff were only identified by the participants in connection with the dissertation period. This suggests that students are in particular need of support at this time or that tutors become more difficult to contact. It could be that the busy dissertation period heightens existing problems, with some students suddenly becoming aware of their need for help or guidance and their subject staff as busy as usual, but unable to deal with their students in such numbers at this crucial time.

5.4.3 Negative effects of research or consultancy on course content or teaching

The two secondary themes to emerge from analysis of the group discussions were effects on course content and effects on teaching. In coding, these two extracts were differentiated by the requirement that an extract make clear reference to materials or topics of discussion used in the classroom to appear as an effect on course content.

One participant expressed doubts over the desirability of incorporating research/ consultancy into the undergraduate programme:

> **13** I'm not sure how it would sort of integrate either with the actual course. Whether it would be a downside to the course – I'm thinking of sort of timescales. Whether you could sort of integrate that: I know like on the final year project dissertation and that sort of thing, it's quite easy, because that's a big... that's going over a year, you've got a lot of time to work on that sort of thing, that's not a problem - putting research into that – but, erm, how do you go about doing that, sort of in the second year?
> [Level III male, Computing]

A certain amount of frustration was also evident in the words of this participant when he talked about what kind of academic progression he had expected from the three years of his course:

> **14** You just realise you haven't done it! You're doing so many other things that you then haven't got the energy to say, "wait a minute, they've lied!" They talk about all these things about the third year, "Independent learning is valued and your opinions actually matter." Then you've got something at the bottom, you know, 'not enough referencing', you know, 'where did this idea come from?' well, you can't have it both ways. You can't ask us to come up with our own conclusions then expect us to reference the conclusion of an assignment.
> [Level III male, Environmental Management & Policy]

> **15** F1: Yeah, particularly in our first and second year, we didn't really do that much research and then, just suddenly having to do the dissertation, to sort of have to do that in the third year. It's a sort of completely different way of going about things.
>
> F2: There's a gap between the second year and third year and you're left on your own...
> [Postgraduate female, Landscape Architecture & Level III female, English & History]

Deleterious effects on the teaching that students receive are not always linked with research and consultancy. Examples include:

> **16** F1: It's like across the board, like, all lecturers don't seem to be very helpful. You get a few, but...
>
> F2: I can't even remember one nice lecturer on the [*name of undergraduate course*].
> [Both Level III females, Sports & Exercise Science]

> **17** Whereas some lecturers you just think, "They've just talked for two hours", and you don't really know what they're talked about, you don't know what they've achieved from the lecture, you think, "well it was pointless."
> [Level III male, Computing]

Once more it is the absence of focus on the student that is being criticised in each of these cases.

There are a number of comments on how teaching has been affected more directly by research/ consultancy:

> **18** We've had a lecturer who sort of took us for an hour, and just went on about he could describe how he'd done his research paper. But it was actually in a field that hadn't really any relevance to our course; it was completely based on buildings as opposed to landscapes.
> [Postgraduate female, Landscape Architecture]

> **19** Whereas other lecturers are more, just, saying what they want, you know. Obviously, what they want to tell people about their own research and their own topic of interest. Definitely.
> [Level III male, Computing]

The concern that staff research interests should not distort the curriculum comes through strongly here, but in general, participants tend to see negative experiences of teaching in terms of help or guidance they feel they did not receive, rather than addressing the conceptual question of linking teaching and research and consultancy in the curriculum. So it is hard to say what proportion of the negative teaching experiences that the participants report are due directly to staff research and consultancy. However, one extract focuses on the nexus and locates it in the staff member:

> **20** They're not as likely I don't think to keep up to date with what's going on if all they're doing is coming in and teaching.
> [Level III mature student, Business Management & Politics]

The extract below summarises well the recurring issues in the themes so far: lack of guidance and availability from tutors as well as problems identified in teaching styles. Again, research and consultancy are not called directly into question:

> **21** F1: We have had to hand in assignments that we've had pretty much no help with. You know, the final semester of the final year, when we're trying to get the best degree we can, we're handing in work that I feel I've had absolutely no help with at all. I've no idea whether I was even on target or what.
>
> F2: And if you ask him a question, like, "Is the new president of the IPC disabled?"- "I'm not telling you what to write, you have to go and find out yourself, I can't tell you what to write." But it's like, it's just yes or no! That's all I need. It's like, "I can't tell you what to write", but I'm not asking him what to write! I'm just asking him a question!
> [Both Level III females, Sports & Exercise Science]

5.4.4 *General negative learning experiences*

The conclusion reached in the above extract is not based on the participants' appraisal of the teaching-research/ consultancy nexus. The negative effects that they identify are attributed generally to tutors' preference for other activities then teaching and guiding students. One might contend that it is a relatively easy option for participants to complain about the teaching they receive. Indeed, it was a noticeable phenomenon of the discussion groups that one complaint would often lead to a series of related complaints from elsewhere in the group. So it is that a significant feature of this data analysis is the creation of a new and wide-ranging category for negative extracts that do not criticize directly research or consultancy. In part this results from the small response rate to parts of the questionnaire exploring negative experiences, meaning that the small-group discussions had no data to build on at that stage. Negative experiences, if they occurred, were doubtless of a different sort.

The reality of student-staff relations is evidently a more complex issue than can be reduced to reliability of communications or unhampered staff availability to students. However, other intervening issues were tested in the questionnaire, with three statements offering respondents the chance to agree that staff showed: *an apparent lack of interest in teaching and facilitating learning or supporting academic welfare* and *an inability to explain material in ways that can be understood*.

All three of these statements went effectively unrecognised by respondents to the questionnaire, with postgraduates even recording 0% agreement with the second of the three propositions. Whether students did recognise the problems to some extent (as the group discussions suggest) but did not attribute them to staff research/ consultancy is unclear, but is a likely explanation for the discrepancy between questionnaire results and group discussions. Accordingly the negative effects cited would typically express a work-centred dissatisfaction with their education:

> **22** F1: He [*male lecturer*] won't read our work, won't sort of give any help.
>
> F2: Some lecturers are just boring.
> [Both Level III females, Sports & Exercise Science]

23 F1: Yes, I do think it's very much a case of, "Read this book", and not share personal experience, which is a real shame -

F2: Mmm.

F1: – it's almost that they don't want to... you know - that you've got to develop your own ideas, I'm not going to, sort of, tell you what to do –

F2: Yes.

F1: - but there are times that you do want some advice

F2: Yeah.

F1: - and then you build on that advice, and you may do it - something completely - you may do it in a completely different way, or you may take - but it's just hearing, as you say, someone else's perspective on what -

F2: Yeah.

F1: - you know, and experience.
[Both Level III female mature students, Geography]

When participants are explicit about what they do not appreciate in tutors and lecturers they tend to have recourse to an ideal of academic freedom where their learning is paramount and their ideas and opinions solicited and respected throughout. Once more, aspects of the 'Ivory Tower' image of higher education are called upon. Hints that tutors have more pressing things to do are not appreciated and nor is a lack of support at the most important time in their course. However, there is little evidence that participants had reflected on what was occupying absent staff and the conclusion from these extracts must be that students expect a great deal from their tutors but find it difficult to know how to create and maintain a productive relationship. This inference is supported by the following extract:

24 It's just really difficult, actually building up a relationship between students and the lecturer, with the Undergraduate Modular Scheme, you find you're sitting in a class one day with a whole group of people that you don't know because you've gone into that particular course, as part of your course, and building up relationships with the lecturers when you don't know them very well and they've got 120, 150 students is extremely difficult. It's only in the Business School, they do tend to pile people in.
[Level III male mature student, Business Management & Politics]

Other general complaints not related to availability, communications or course and teaching implications ranged from criticisms of the ethics behind corporate sponsorship to lack of help from lecturers and tutors and broader-reaching criticisms of organisation at the University:

> **25** Trouble is then, you get the American system of corporate sponsorship of universities, and they've got huge problems in the States with tobacco companies sponsoring sports centres, and arms companies. An ethics department had their [*word unheard*] sponsored by an arms company. [Level III male, Environmental Management & Policy]

This is the only extract from any group to make mention of the moral obligations of the University.

Several of the extracts included here amount to imprecise formulations of unhappiness with certain aspects of University life. In these instances it would be hard to say what the object of the speaker's criticism actually is. Otherwise there are some clear themes and certain aspects of University organisation and tutors' attitude to work stand out the most.

Lecturers' attitudes to their teaching responsibilities are sometimes raised:

> **26** F1: They said categorically, 'We are here to lecture you! We are not here to teach you! You do that yourself.' And I thought, well, that's great, but then how - who was going to help us develop? How to deal with this chasm between teaching and being lectured... at?
>
> F2: Mmm. It's very true – I mean it's how much they teach, how much, yeah, they just lecture and go home. But then how much do you really learn from that?
> [Level III female, Computing & Postgraduate female, Landscape Architecture]

This extract shows how student expectations and lecturers' styles may not coincide. In this case the need for guidance is expressed again, and it is here that much of the negative feeling over learning experiences at the University is located.

Another theme seen earlier is the doubt in participants' minds over how much they are allowed to contribute themselves and how much they are required to reproduce from other sources:

27 F1: That's one of the problems I think - that sometimes you feel that in order to get a good mark you have -

F2: You have to put their ideas.

F1: - to argue their views. Because I've found myself doing that in a diss. before, thinking, 'This person would think this, so if I argue that I'm going to get a good mark.' You don't actually benefit yourself.
[2 Postgraduate females, Landscape Architecture]

This problem in conceiving what University work requires is developed further in this extract, where a debate takes place over students' freedom of opinion.

28 F1: But that's when you have to start arguing your own points though, and say 'Well, such-and-such thinks this but...' actually, you might agree with your tutor. I'd –

F3: No, no -

F1: - certainly disagree. Can you not do that?

F3: No, you still need to have... whatever our opinion is, even if I don't specifically, or I don't -

F1: Do you have any of your own views?

F3: You can have your own views as long as somebody else agrees with them.

F1: So it's not actually primary research that you're doing.

F3: I mean basically, it's read books.
[Postgraduate female, Landscape Architecture & Level III female, Computing]

5.5 Evidence of disconnection between students and research and consultancy and suggestions in the data for more student inclusion

5.5.1. Evidence of no student awareness of or involvement with, research or consultancy

The final theme in this section exists because discussion group participants often objected that they simply didn't feel in any way touched by research and

consultancy. This may indeed offer a clue as to why so few respondents to the questionnaire were able to identify specific negative effects of research and consultancy on their learning experiences. This alienation is evident in several extracts:

> **29** Me: Is there anything else that you want to say about research, your encounters with it, people you know who do it, before we disperse?
>
> 1: Just that I'd like to see a lot more of it, that's all. Shame I didn't get to do... didn't get involved with it.
>
> 2: I just think we need more links between the research that the lecturers do and the students. Rather than them doing research, why isn't that involving us?
>
> 2: Why are they separated?
> [Level III males: 1: Computing, 2: Environmental Management & Policy]

> **30** Maybe they just need to talk about it [*research*] more, and bring the students actually into... you know, into their work.
> [Level III female mature student, Geography]

Some comments serve to reinforce the idea that students would be interested in the teaching-research nexus (or at least, lecturers' or tutors' research) if only it were presented to them, but it is unlikely too that remarks like those immediately above can be addressed satisfactorily. Few universities would want to have their Level 1 undergraduates researching from the beginning and it is doubtful whether that is quite what the participant means.

Finally, the longest extract from the discussion groups is included here because it depicts well the relationship of students to University research units themselves and touches also on the central question of this section: what are students' negative experiences of research/ consultancy at the University?

> **31** F1: Maybe, I mean, do you know, I've been here for three years and I know so little about those research units it's frightening. Whether that's just me, maybe I've just not been in the right place at the right time, but you know, I just know... you mentioned two units and I know so little. I know the odd face. But what you do in there? You know, you walk past it to get into [*name of building*], and it's just a unit and you know, there must be all sorts that goes on in there. But you don't - I just don't know. Do you?

M: It's the only one I know about, the [*name of unit*]. Because that's obviously very – it's linked towards my things.

F1: Yeah. But, [*name of 2nd unit*], I've always walked past it, every day! And you see people in there –

M: You just accept it, don't you?

F1: - you just don't know what goes on!

[*laughter*]

F2: When are you going to get past the door, though?

F1: and what happens to the research that you conduct? You know, what do you do, where do you go, what... where is it?

F2: Yeah, you know, where can you read it and things?
[Two Level III female mature students, Geography, Level III male, Geography]

5.5.2 Suggestions from the data about enhancing the teaching-research nexus or student learning experiences

When students offer the opinion that they had not been given the chance to participate in research or consultancy as much as they would have liked, they sometimes offer suggestions as to how the nexus could be improved for them. The example below shows two students at the end of their final year who are actively engaged in reappraising the structure of their programme.

32 1: I mean there's one thing I can think of within English, sort of from a computing point of view, sort of artificial intelligence, understanding language is a big problem from the computing point of view, because erm, although we understand computers we can't break down the English language well enough. You know, not that we don't understand it, but we don't know how, you know, the details of how a sentence is made up and how to turn it into a question and that sort of thing. We don't sort of think that way. Whereas if you worked with some English students, I'm sure they would be able to think of that and you could sort of work with that...

2: I imagine that perhaps the lecturers actually are doing this. So we have all these lecturers - perhaps they are doing this but they don't involve the students. So we have this huge amount of lecturers doing this consultancy work but completely detached from what the students are doing and it's become, 'lecturers lecture, and in their spare time, do the research.' It's not linked to what the students are doing, because they could help. You know, you could get English students into the computer department.

1: Yes, I mean you could have a joint project going on, that sort of thing, because, you know, from the Computing side it could be very much a practical thing, but they could bring it together, it would be in two [sections]. [1 – Level III male, Computing; 2 – Level III male, Environmental Policy and Management]

Such a vision for undergraduate education places the student in a central role and shows how, in this case, a Computing student is able to plan out the broad lines of a cross-disciplinary research project. The key to understanding the extract is nonetheless to recognise a) that this did not actually take place and b) that one of the students thinks it likely that lecturers are doing this kind of thing without involving students. In any case, a major fault line is identified in the second paragraph, where the speaker says, 'It's become, lecturers lecture, and in their spare time do the research.' Clearly, this student does not feel that the link has been made successfully for him.

The second suggestion for redressing perceived imbalances in the teaching-research nexus looks again at the role of the individual academic:

33 M: I disagree. I think their research is a really healthy part of the lifeblood of the university. I think it's really important that they're doing it. I think they shouldn't be overburdened by the university authorities then with lecturing, there should be more lecturers available, if there's a problem. They shouldn't be cutting down on the research, it's such an important part of keeping up to date with what's going on.

F1: But if they don't have extra lecturers, which they probably can't afford to take on extra lecturers, then they should be available for the students.

M: Yes, and if Barney is trying to find where the dividing line is, I think it's not that they should be doing less research, there should be more lecturers. Whether that's going to happen in reality...

F2: I don't think they should be doing less research. They should be doing more research in their own time.
[M: Level III mature male, Business Management and Politics; F1 & F2 female Level III Sports and Exercise Science]

Between the three speakers it is agreed readily that lecturers must be available for their students. At the same time, the recognition of the potential importance of research and consultancy to lecturers and students comes through once again,

though this group addresses the practical issue of numbers of available staff and goes some way towards suggesting a division of labour between teaching and research staff.

Once more the issue of lecturers researching in their own time is raised, but here the speaker means that since research is effectively a lecturer's private business it should not be allowed to encroach onto lecturing responsibilities. In the previous extract it is open to question whether 'in their own time' refers rather to any time not spent lecturing students: a more sweeping indictment since the implication is that outside of lecture hours the lecturer is no longer employed in the service of students. This topic appears once again in another group:

> **34** Or if there was like, a body of lecturers that don't tend to go off here, there and everywhere, sort of thing, and those were the ones that deal with the students, you know, because other lecturers then could do most of the, you know, higher research.
> [Level III mature female student, Geography]

Other suggestions offered to remedy a lack of connection with research or consultancy include:

- From two groups, a register of academics' research interests 'because at the end of the day we might be aspiring academics' [Level III female student, English and History] or scheduled lectures to present departmental research and consultancy to all students;
- With reference to the Computing field particularly, better use of bulletin boards with research or consultancy interests;
- Getting companies or other employers to follow more closely students through their undergraduate period and have those students perform useful discovery research rather than replicating known experiments;
- One mature student remembered an office where students could get all the information they needed about lecturers' availability and regrets that it is no longer there;
- Improve evaluation forms for key periods of academic contact and support: one student wanted to offer a full evaluation of his dissertation support but didn't feel he had enough of an opportunity.

5.6 Summary of negative experiences and views of research and consultancy

In summary, the majority of the extracts from discussion groups concern individual experiences of relationships with staff or pieces of work and lead to complaints of a more or less general nature. Some extracts serve to reinforce the idea that students would be interested in the teaching-research nexus (or at least, lecturers' or tutors' research) if only it were presented to them, but it is also true that some of the complaints included above find their solution at a different level than that of the teaching - research nexus.

That is not to say that these observations are not well founded however, and the section is instructive in what it tells us about student expectations of studying at university. Indeed, one valuable lesson to retain from the negative themes examined here is that students expect and cherish moments of collaboration or real understanding with their tutors and feel let down when there is no chance for this to happen.

The suggestions that students make for reintegrating research with their own learning experiences centre around better and more frequent communication of staff research and consultancy to students. However there is a strong feeling that if research is as important as it seems, more should be done to connect it usefully to student learning, or *in extremis*, ensure that it is kept separate so that the necessary contact time between students and staff is not affected.

Development of the teaching- research/ consultancy nexus may provide for just such opportunities for mutually beneficial work to take place between staff and students (see Chapter Two).

Overall, the following points emerge from this section of the analysis:

- Staff unavailability was the most commonly cited problem related to research/ consultancy-active staff;

- In general, very little negative opinion was gathered from the *questionnaire*. Students did not respond strongly to any of the proposed drawbacks of research/ consultancy-active staff;

- Where students express negative opinions on research/ consultancy they are often born of disappointment with the relationship that they had with their dissertation or independent project tutor;

- Many negative extracts from the discussion groups are of a general nature, not specifically related to research or consultancy;

- Some participants in discussion groups felt that the whole issue was almost entirely irrelevant to them as they had had no contact whatever with research or consultancy.

6.1 Review of thesis and context of conclusions

This investigation has sought to identify and investigate student views and experiences of the practice of research and consultancy in one new UK university. This institution, it is acknowledged, displays significantly different characteristics from UK universities in the 1950s or the German nineteenth century model (see Chapter Two); where smaller bodies of students, better defined fields of knowledge and enquiry, and a job market less reliant on tertiary education meant that discovery research occupied a less central position in undergraduate universities.

Nor is the institution typical of higher education in the UK. It is rather representative of a type of university that has grown up in the modern climate of research and knowledge, where the commercial application of research and increasingly trans-disciplinary nature of knowledge allow for innovatory approaches to learning and teaching.

Chapter One described the background to questions of this sort, introduced the key concepts of scholarship and discipline and set out the aims and methods used in the research.

The research was structured around four questions:

- How do students in a new university experience research and consultancy?
- What benefits and disbenefits do students receive from the research and consultancy that takes place in their university?
- Do undergraduate and postgraduate students from different subject areas have different experiences of research and consultancy?

- How might the university use the teaching–research/ consultancy nexus to improve students' learning experiences?

A reading of the academic studies attempting to answer similar research questions, usually based on analysis of the teaching-research nexus, showed that efforts to prove the existence of the nexus through quantitative testing have foundered. In trying nonetheless to explain why it is that many academics feel that such a link exists, authors have pointed to the need for more sensitive research methods and a better understanding of the processes involved in teaching and research. One such key process is that of learning.

Chapter Two examined literature pertaining to scholarship and the role of the university, in the goal of contextualizing the current research. Then it addressed the place of the disciplines, through research aiming to see how far academics in different fields of study themselves feel teaching and research are integrated. There was also an examination of Kolb's experiential learning theory to show how this provides a solid theoretical base for assuming that disciplinary cultures also affect the student's approach to learning. It was asserted that it is at the level of the department that the university is best able to bring teaching and research together. There was a summary of previous student-centred research into the teaching-research nexus and an explanation of why such an approach has come to be thought necessary, before the findings from these investigations were set out.

Chapter Three presented the methods employed in this research. Following the lead of recent student-centred work, the research operated a mixed-method phenomenographical approach that here sought to relate two sets of data to each other and the findings of previous research. The use of the student-experience questionnaire and small-discussion groups was justified with regard to the research questions asked, and the advantages and drawbacks of these methods made clear. The method of data analysis was explained and the limitations of the project pointed out in relation to the validity, reliability and representativeness of the findings.

Finally, Chapters Four and Five presented the results of the research by significance of the themes and questions raised. The results were analysed according to whether they give evidence of real involvement or awareness of research and consultancy, and whether they are positive or negative about the effects on learning experiences.

The results are summarised below (section 6.2) and a model for academic practice suggested that puts students at the centre of university life, with inquiry the dynamic that aids them to develop as learners. This model and the remarks accompanying it are adapted from the work of the Australian academic Angela Brew (2003), with alterations made in accordance with findings from this research.

The academic community of practice, with a version of the 'master-apprentice' model of student-teacher relations providing the guidance and sense of belonging that students demand, links the above observations in a potentially multi-disciplinary network of scholarly endeavour. Successful limitation of the negative consequences to students of research or consultancy through management of the teaching-research nexus ensures that students feel that they are treated as 'legitimate peripheral participants' (Brew, 2003) in the academic community. Their place currently as bystanders to the academic world is a compelling negative finding of this investigation and preceding ones (Jenkins *et al*, 1998; Zamorski, 2000).

In addition, the university has once more the opportunity to be unified behind a 'mission-idea', which returns the student to the centre of its activities, and provides a guiding ethos of inquiry and scholarship for all members of the reconceptualised academic community. This fits also with the pluralistic model of the university (Brown and McCartney, 1998) where the importance of an overarching scholarly philosophy is seen in Luque (2002), who praises the purity of vision of two foundational thinkers in higher education, Humboldt (1970) and Jaspers (1960), saying:

> 'But both versions have one major focus: a concern with rebuilding the spirit of the institution, and, in that spirit, to establish its direction as an ideal atmosphere in which to seek truth, scientific achievement, and freedom' (Luque, 2002: 1).

The emphasis on scholarship, seen in the paragraph above, is central as it tends to allow for student-centred and reflective teaching practice, as well as focusing on inquiry in the curriculum and the induction of students into a community of practice where the establishment of knowledge is the shared goal. Disciplinary research methods are the benchmark to be applied, or else modified through negotiation of meaning between all participants. In this way, teaching and research become related aspects of inquiry, and the fault-line between transmission-style teaching and staff research is seen as the obstacle to generalising benefits from the teaching-research nexus.

These features of the proposed model for higher education mean that students have the chance to become stakeholders in their institution and to develop the skills of critical reflection and inquiry that are traditionally seen to be emblematic of higher education.

6.2 Findings and implications of the student data

The data obtained from the questionnaire and small-group discussions allow a picture of student awareness and experiences of research and consultancy to be drawn. In this picture there are broad-brush observations which provide answers within the limitations of this research (see Chapter Three) to the research questions asked.

6.2.1. Student awareness and experience

Students in this new university have many experiences of research and consultancy. They are typically encountered through dissertation or independent project work, where students become aware of the research process they will undertake. Their experience is often shaped by the relationship with their dissertation tutor or lecturers, where students may also form understandings of the diverse nature of university work.

Students' awareness that research or consultancy takes place is variable and sometimes rich, but they are usually unable to say how their lecturers fit it in with other commitments and are vague about the nature of the research or consultancy work they identify. This study provides almost no evidence that participants understand currently how research is awarded, funded or carried out at any level higher than the dissertation and students often make allusion to this lack of knowledge while trying to explain the research they had encountered.

Some more detailed and localised awareness (as described particularly in small-discussion group extracts) often comes from contact with academic staff during the dissertation process and the regret is expressed that more was not known about staff's interests before choosing topics and supervisors. This leads to several independently reached conclusions that staff should register or otherwise communicate formally their research or consultancy activities for the benefit of students, who are interested in but currently feel excluded from what academics do when not lecturing. Ways of doing this electronically are suggested.

Much is made of having come across research and consultancy in lectures, though mostly as this gives rise to anecdotes and experiences that lecturers mention. Around half of all respondents have awareness of research or consultancy advertising or outputs appearing around the University. Some students in the school of Leisure, Tourism, Hospitality and Sport showed a heightened appreciation of the role or research or consultancy through experience of tutors actively engaged in sports coaching, and the opinion that this sort of work is less 'academic' than traditional research is expressed. In general, students stress that they would welcome more opportunity for involvement with university research and consultancy.

This combination of awareness, interest and speculation on the part of the student as to their academic subject staff's roles is a finding that this study adds to the literature as an image of the disconnection between staff research and student learning.

6.2.2. Benefits and disadvantages of research and consultancy

Students readily identify benefits thought to come from research or consultancy. Amongst these students identify principally the enhanced enthusiasm and motivational ability of their lecturers and tutors. They also appreciate staff's being up-to-date and the help they can receive when undertaking dissertations or projects, as well as the prestige and contacts outside the university that research can bring to their lecturers. Effects on course content and teaching style are less often remarked upon, but students do think that where research is relevant, it can contribute to 'better' lecturing.

Other benefits thought to occur are the increased possibilities for students to make links with the outside world in general and for later employment in particular. Consultancy is identified as opening the door to further work with local companies, especially if the student has spent time with them before graduating or has a record of 'real work' to show prospective employers. This is the research's main contribution in relation to consultancy, though it is not yet a very common feature of student learning experiences.

The major disadvantage of research and consultancy activity is identified as the lack of availability of lecturing staff, but particularly of the dissertation tutor. Examples of dissatisfaction are recorded where students felt neglected by their tutor. More generally, this dissatisfaction broadens out into a criticism of staff-student relationships.

Negative features of these relationships include the failure properly to communicate either research interests or absences due to research to students, general lack of helpfulness, the focus on the lecturer's research in a lecture at the expense of curriculum or evaluation targets; and at the extreme, complete lack of contact between students and research activities or research units. The emphasis placed by students on the helpfulness of their tutors, in particular, adds to an understanding of their role in students' eyes. In need of some guidance, students naturally seek to form academic relationships with people more experienced than themselves. Problems with seeking help are articulated. Modular courses and staff absence are both cited by students as factors that prevent them from feeling a sense of belonging. These findings pick up those of previous student–centred

studies, but with the nuance that, in particular, it is staff-student relationships that need to be readdressed in some cases. Research and consultancy involvement is understood as offering a chance for a reintegration of students with 'real' academic activities.

6.2.3 Differences at levels of study and discipline

In nearly all cases, postgraduates display more knowledge of research and consultancy and the way they are currently linked into university curricula than do undergraduates. The mature students whose voices are heard in the discussion group extracts have more in common with postgraduate views than those of other undergraduates. Undergraduates recognise the value of the dissertation and independent project more than postgraduates however, and while this is in part due to the timing of the research (see Chapter Four) it points once more to the centrality of this period in the undergraduate learning experience. This is a finding seen in other studies, but is reiterated here to underline particularly how in this case, talk of the dissertation period gave rise to most of the student participants' positive and negative remarks about staff research and consultancy.

There are differences between the disciplinary groupings analysed, with students from the school of Leisure, Tourism, Hospitality & Sport more aware in nearly all cases and more involved with research or consultancy than those from the Business School. Business School respondents are nonetheless the grouping that feel they have learned the most from undertaking their own research/ consultancy project or dissertation, and who feel most strongly that they have not received enough training in research/ consultancy skills, suggesting that there is nothing about these students' own approach that is inimical to research and indeed that they want to know and participate more. The finding that Business School students in particular ask for more research involvement supports Kolb's (1984) contention that their learning style favours hands-on experience and counterbalances their lack of awareness and positive opinions.

The rest of the respondents, grouped as 'Other' disciplines (see Chapter Three) also show more awareness in nearly all cases than their counterparts from the Business School. This grouping is too heterogeneous to draw conclusions based on the field of study but, composed of arts, humanities and environment students

and those from 'joint' courses (i.e. not exclusively within the Business or Leisure, Tourism, Hospitality & Sport schools), the grouping is of a different character to the other two.

6.2.4. An image of students' expectations of higher education

The strongest message to emerge from this investigation is perhaps the degree to which students are only partially aware, or conscious of being unaware, of their lecturers' and tutors' occupations other than teaching. Speculation about holidays, time off and hours of presence in the University is common. This means that students do not have a full role at present in the academic community, a judgement with which Barnett (1992) would concur. Certainly, with few exceptions, the students in this survey are a long way from Clark's (1997) ideal-type research-teaching study nexus, or Humboldt's vision of research teams led by influential professors where science is pushed forward by ceaseless inquiry. This finding reiterates one of the benefits to students identified by Neumann (1994) as well as Jenkins *et al* (1998); the insights into staff as people and learners that research involvement allows.

A better description of students' relationship to research in this case would be of piecemeal communication of staff's actual research and consultancy activities and the intention that students develop their skills of inquiry through dedicated modules and the independent project or Level III dissertation. Some lectures are research-led or research-based, and students mention problems in achieving academic relationships with teaching staff owing to the large numbers on modular courses.

From the contact that students do have with research or consultancy at the University they do not generally retain a focus on inquiry skills or research techniques, but on the associated members of academic staff with whom they are happy, disappointed, proud or indifferent to be working.

These findings support what Zamorski (2000) discovered about students' experiences of research-led teaching in almost all respects. Her findings include notably that:

- Students value highly the experience of studying in a research-rich environment... [*and*] the idea of the University as a research community in which they are included, there are many ways in which in practice they feel excluded;
- Students have a poor grasp of the nature of academic work (Zamorski, 2000: 1).

The extent to which Zamorski's findings anticipate those of this current study, particularly as they stress the importance of the dissertation to students' understanding of research and the sometimes problematic nature of staff-student relationships (Zamorski, 2000: 41) provides a credible aid to understanding why a lack of awareness of the practice of research and consultancy might occur.

6.3 A model of staff-student relationships supported by the student data

A major conclusion of this investigation is then the extent to which students feel that a renegotiation of the terms of their presence and learning at university is desirable. The change may not need to be a radical one, but some of the traditional hierarchies and boundaries in higher education are open to revision. The renegotiation that is suggested by this research touches principally on staff-student relationships, with the focus on contact time and a particular kind of guidance that students feel is currently missing.

It may be objected that it is hardly surprising for students to claim they need 'better' relationships with academic staff, since as learners they are apt in the first instance to point up perceived faults in the curriculum they follow rather than reflect upon their own possible shortcomings in approaches to learning. However, the changes in relationships between staff and students that are implied in this investigation fit closely with a new model of the teaching-research nexus proposed by Brew (2003).

This model (see Figure 6) takes into account the realisation that, 'knowledge [is] constructed within a socio-political context' (Brew, 2003: 11). This accords too with Gibbons *et al's* (1994) division of types of knowledge (see Chapter One) and the growth of interdisciplinary activity in higher education (Healey and Jenkins, 2003).

The corollary of this shift is the incompatibility of the traditional transmission method of teaching with effective student learning in such a climate, so that participation in research or inquiry-based learning methods suggests itself as an ideal way to fit graduates with the skills required by a society of Mode 2 knowledge (Gibbons *et al*, 1994).

The model is slightly adapted to incorporate a version (as 'Student Learning') of the traditional hierarchical structure of the university. This permits an understanding of the student's place in the academic community of practice as a less experienced and informed practitioner than the member of academic staff.

This reading is called for by the principal finding of this investigation, **the extent to which participants wanted to know, learn from and build an academic relationship with their lecturers and tutors**, not least as this includes an appreciation of their other main activity than teaching; research and/ or consultancy.

This model first situates the academic community of practice in relation to the way knowledge is formed and used in the socio-political climate. This outward-looking layer is the expression of the community's academic purpose in society, and will depend on disciplinary traditions, resources available and so on. Importantly however, it is at this level that a goal is given to employment or study at the university which goes beyond personal gain, and invigorates the entire community of scholars in a shared view of how their work fits in to society.

The next layer of the model addresses the scholarly approach to the field that both staff and students ideally take (conceptions of scholarship). Again, these conceptions are open to negotiation, because:

> 'In the new model, teachers' and students' activities are not viewed as separate. In engaging in research, scholarship or learning, they engage as legitimate peripheral participants in academic communities of practice' (Brew, 2003: 12).

The four scholarships of Boyer *et al* (1990) here define professional approaches to the various kinds of academic work a teacher and researcher is expected to carry out. The types of scholarship that apply to a given academic community will

depend on their overarching purpose as seen in the previous layer. Students may be expected to adopt a scholarly approach themselves where their learning takes place in a research-rich environment, their evaluation is formative and embedded in the curriculum as part of the continuing cyclical process of education.

At this level the contribution of the disciplinary culture to the negotiation of meaning plays a part once again. In common with Healey (2000), who advocates a scholarship of teaching rooted in the disciplines, and Colbeck (1997) who maps academics' conceptions of research onto the disciplinary paradigms identified by Biglan (1973) and Becher (1989), this adapted model gives disciplinary influences a pronounced role in the way staff and students negotiate the meanings of scholarship. This addition also supports the conviction that:

> 'Learning can be enhanced through the effective integration of teaching and research in a way that reflects situational and disciplinary characteristics' (Willis *et al*, 1999: 3).

The inclusion of the word 'situational' allows for many different interpretations of the way that teaching and research might be integrated, so that for example undergraduate and postgraduate programmes of study might differ in the amount of research training offered, or in the amount of foundational instruction thought necessary to progress to guided, research-style project work.

The next section of the model is the level at which student learning takes place, following the four main actions of Kolb's (1984) learning cycle. 'Learning is the process whereby knowledge is created through the transformation of experience' (Kolb, 1984: 38). The original labels of 'Understand, synthesise, communicate and apply' used by Brew (2003: 13) are here replaced by Kolb's (1984) 'Observe (experience), think (reflect), plan (generalize) and do (test)'. As Healey and Jenkins (2000) assert, the experiential learning theory, 'provides a rationale for a variety of learning methods, including independent learning, learning by doing, work-based learning and problem-based learning' (Healey and Jenkins, 2000: 186) and this angle is taken in order to reflect the way this cycle resembles the research process, an exemplar form of problem-based learning. This learning, it is once more asserted, requires validation and supervision by senior members of the community of practice, but is second in the model only to the definition of the community of practice itself.

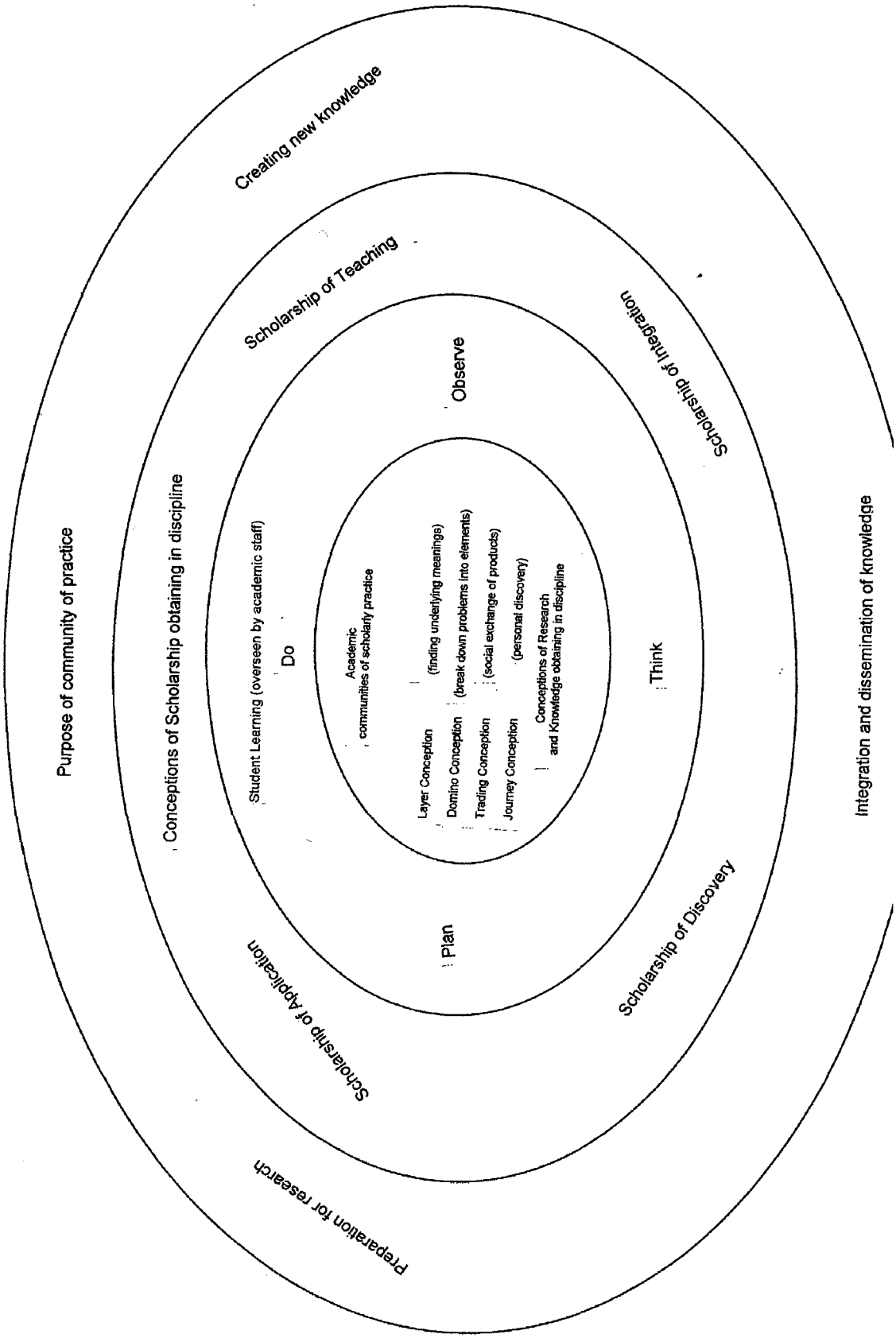
At the core of the model the academic teacher is placed alongside the student in a relationship to knowledge (conceptions of research), which is seen to depend on the disciplinary culture and the teachers' and students' own beliefs on what counts as knowledge and valid research. This accommodation is the result of negotiated meanings (i.e. what shared understandings the teachers and students arrive at of the meaning of research) that the two parties bring to their task, where the experience of the teacher is not excluded as a powerful deciding factor. This last qualification is an addition to Brew's (2003) model, although nowhere does she explicitly discount that this is one important way that meaning is negotiated.

In such an environment, Brew's 'academic community of practice' (2003: 12) becomes the body to which students feel that they belong, where achievement in all forms of scholarly activity is rewarded and where they are 'legitimate peripheral participants (Brew, 2003: 12)'.

It can be seen in this model that students learn through guided inquiry processes which are followed more or less closely according to the global aims of the academic community of practice and the dominating conceptions of scholarship obtaining there, which in turn depend upon traditional disciplinary views about the type of knowledge sought. At the core, unifying staff and students at a level beneath institutional hierarchies, are negotiated decisions about the appropriate ways to conduct research in order to arrive at valid results.

The focus on the construction of knowledge through inquiry also responds to calls from Barnett (2000) and Brew (2001) to fit higher education for a world of super-complexity (Barnett, 2000). Uncertainty is then seen as an essential feature of modern intellectual inquiry, where any given field also exhibits unending specialisation (Clark, 1997). Technological advances mean that a great deal of knowledge is potentially available to all academic staff and students, who nonetheless study and research in bounded units, semesters and timeframes. This is the current socio-political context that touches on the purposes, approaches, learning styles and views of research and knowledge that characterise these suggested communities of practice.

Figure 6 A model for a new academic community of practice



Adapted from Brew (2003: 13)

6.4 The nexus organised at departmental level

As discussed in Chapter Two, the strategic decisions about integrating research with teaching for the benefit of students are likely to be made at departmental level in universities. This raises the question of how to manage the teaching-research nexus in order that students' concerns about inclusion in the academic community, seen here and in previous student-centred studies, are addressed.

Jenkins *et al* (2003) cite evidence that the department plays a key role in developing teaching-research cultures in staff, and offer eleven strategies of integration to be enacted at this level. Central among elements of these strategies for this conclusion are the suggestions that departments use staff research findings in undergraduate courses and that postgraduate students are encouraged to open up their research interests and expertise to the view of undergraduates. Both this strategies tend to reinforce the progression from directed learner to member of the academic community, and allow undergraduates a view of how the academic hierarchy is structured through research and joint inquiry.

Such proposals, alongside several case studies of successful integration of teaching and research at departmental level, are offered in the belief that:

> 'Given the central role of departments in enacting the nexus, effective integration between teaching and research needs to be managed at that level' (Jenkins *et al*, 2003: 141).

If it is considered that research evidence consistently points to a disjunction between the actual practice of staff research and student's perceptions of how universities function, the attempt to limit negative consequences of research and consultancy identified in Chapter Five finds a focus in management of the student curriculum at departmental level.

Five suggestions for policies at departmental level make it clear that a teaching-research nexus of the sort that supports scholarship in all participants of that academic community of practice (Brew, 2003) and develops students as askers of critical questions through problem-based or inquiry-led learning cycles, can be integrated beneficially into the student learning experience when:

- Students are made aware of the role of research in their discipline and involved in staff-led research projects.

- Students are made aware of staff's motivations for carrying out research.

- Students are notified about all staff research absences and informed as to some results of that research

- All means available are used to minimise the effects of staff absence.

- Regular discussions with student representatives (this would take place naturally in an academic community of practice of the type proposed by Brew (2003)).

(adapted from Jenkins *et al*, 2003: 76)

With these proposals, echoed elsewhere by Friedrich and Michalak (1983) and Zetter (2002), effectively dealing with all the major negative student perceptions of research and consultancy discovered by this present study, it may be concluded that in principle, effective management of the teaching-research nexus at departmental level will provide benefits to students of the sort that they ask for in their learning experiences. Nonetheless, suggestions of the sort made by Jenkins et al (2003) are focused on awareness raising and minimising the negative impacts of research and consultancy. The next challenge is to take note of how students assess the positive impacts of research and consultancy and consider how to restructure the curriculum accordingly. Both student-centred research and current literature in the field of academic development tend increasingly to promote an inquiry-based curriculum where students have a role in the academic community.

6.5 Limitations of the investigation

At the time of writing, this research is being cast in a new light by the publication of the Government White Paper on higher education. This naturally imposes practical limitations on the sort of suggestions it is useful to make in these concluding

remarks, particularly as the thrust of the Government document is to concentrate research funding into economically productive projects in specialised units, largely in the leading institutions. Less well-established universities are encouraged to develop their links with local businesses (knowledge transfer) and excel as teaching institutions. Under these conditions the teaching-research nexus, of which the existence was functionally 'disproved' by the research studies chosen to support the White Paper, is not likely to be favoured in university strategic planning, although applied research or consultancy work alongside excellence in teaching may offer opportunities for the nexus to operate incidentally.

A reinforcement of the teaching–research nexus may take place through concerted efforts at the level of the institution, the department or the study group, but it requires strategic planning, appropriate assessment and frequent interaction between academic staff and students. Observations and recommendations on policy at these levels were not part of this study's research aims and it is recognised that implementation of policies to reinforce the teaching-research nexus is a more complex task than most students might realise.

Nonetheless, a telling report on the state of some universities' investment in their teaching responsibilities is given by Gibbs (2002), who describes a variety of ways used by university curriculum planners to preserve staff time for research and minimize contact time with students and concludes:

> 'Much the most effective strategy for strengthening the teaching-research nexus is to stop neglecting teaching and to provide more opportunities for lecturers' research strengths to have an impact on teaching by them actually interacting with their students' (Gibbs, 2002: 9).

Further, it has been known for some time how students develop best at university.

> 'The most important factors that contribute to the development of students are their feelings of participation and engagement in the university and university environment' (Holst and Lionetti, 2000: 33).

It is recognised that the sizes of the groups during the second stage of data collection are generally small, and that this does not allow this investigation to claim to be representative of higher education in other universities. The focus on a single institution, whilst providing a relatively quick and effective means of

generating and testing a sample population, is a similar weakness. Although the disciplinary findings of this study reflect the implications of Kolb's (1984) Experiential Learning Theory and support the findings of previous student-centred research it cannot be surmised that other Business Schools or Sport, Leisure and Tourism departments offer the same learning experiences to their students.

The relative lack of attendance of postgraduate students in the small-discussion groups does not allow for a distinct picture of their learning experiences to be sketched out. Nonetheless, data from the student-experience questionnaire suggesting that postgraduates gain in awareness of, and opportunities for involvement with research and consultancy, is given voice by the two postgraduate interviewees and the four mature students present.

The model of student learning proposed above is an ideal, where what has been discovered about the way students learn and how academics conceive their role as teachers and researchers is integrated with student-centred research findings. It is recognised that current government policy does not support directly such a creation of academic communities of practice and that such a model calls upon a controversial reassessment of academic hierarchies and roles.

Nonetheless, there is evidence here and from previous student-centred studies of successful integration of staff teaching and research into the student curriculum, and many examples in the academic literature of existing strategies at departmental and course-team level. Departments seeking to enhance links between research and teaching are often able to start with the confidence that many examples of ways in which students benefit from active involvement in research, across a range of institutions, already exist (see Appendix 6).

6.6 Directions for subsequent research

This small-scale project adds to what is known about student learning experiences in relation to research and consultancy, but the way is now clear for a larger, more collaborative investigation. All the previous student-centred research studies focus on one institution, but it is felt that a project that compares the views of students

from the same subject fields in different institutions would be illuminating. In addition, while the mixed-method approach had success in the questionnaire survey, limitations on access to students for the small-group discussions mean that it was not possible to solicit properly the views of certain groups of students. More work remains to be done in interviewing students from natural science and the humanities across institutions, though the preponderance of Business School and Leisure, Tourism, Hospitality & Sport students here reflects, in part, the composition of the university studied.

A few of the results of the questionnaire survey point towards possible gender differences in expectations and views of research and consultancy, as well as tentatively suggesting that mature students have a view significantly different from younger students. This too might be investigated.

Finally, since it is the case that a major finding of this investigation and other student-centred studies is students' lack of a sense of belonging to their institution and a desire to work more with academic staff, research into how students evaluate suggested 'academic communities of practice' would add to an understanding of their expectations of higher education.

6.7 Conclusion

From the research undertaken with almost 200 undergraduate questionnaire respondents and seventeen small-group discussion participants, it is possible to conclude that:

- Students show variable awareness of research and consultancy, with postgraduates and mature students more aware than undergraduates;
- The principal student experience of research and consultancy comes through the dissertation, or independent project modules;
- Students identify several benefits to themselves of research and consultancy, principally as they are thought to help motivate or stimulate teaching staff or learners;
- The negative aspects identified are of a sort that can be rectified through effective organisation of resources at departmental level;

- Above all else, students are conscious of whether or not they belong to an academic community.

The desire of students to play a greater role in their academic communities may be addressed through an inquiry-based curriculum, where the sort of knowledge demanded by employers and apt to fit students with a critical and trans-disciplinary approach, is fostered. This calls for scholarship on the part of academic staff, which can be pursued and developed from within the disciplines. Research and teaching are naturally integrated and the benefits of this nexus fall to both staff and students.

Appendix 1 Letter of invitation for participation in student experience questionnaire

****FIVE CHANCES TO WIN a £20 Amazon.com token****

Dear Student

Your help is needed with a university-funded research project looking at how research and consultancy impacts on the quality of the learning experiences of students in the University.

This questionnaire is being emailed to all level three UMS students and all those registered for a taught course in the PMS. The responses will be added together and no individual response will be identifiable or passed to anyone outside of the project team.

The University is committed to enhancing the learning experience of students and it is also very interested in the relationship between teaching and research/consultancy. To ensure the highest quality links between teaching and research/consultancy we need to learn about the personal experience of as many students as possible. So we would be most grateful if you would complete the questionnaire below. The project has the support of the Students Union and will be advertised in the student newspaper.

If you are responding using the student email account press REPLY first and then complete the questionnaire. Once finished press 'send'.

If you have accessed the questionnaire via the website then please email your response or send hard copy via the Internal Mail system to the address below.

All responses received before March 25th will be entered into the draw for the Amazon.co.uk vouchers, which can be spent on books, CDs, etc. The winners will be informed by email.

If you have any queries about the survey, or would like the questionnaire in a different format, please do not hesitate to contact the project team via the email address.

Many thanks and best of luck in the draw!

Barney Pell, Research Assistant, bpell@glos.ac.uk

Project Team: Fiona Jordan, Project Leader, email: fjordan@glos.ac.uk, Professor Mick Healey, email: mhealey@glos.ac.uk and Christopher Short, email: cshort@glos.ac.uk

Appendix 2 Student experience questionnaire

The student experience of teaching, research and consultancy at the University of Gloucestershire

Section 1: Your experiences of research and consultancy

1.1 Are you aware of any of the following occurring in the university? **Please put an 'X' to the left of all those which apply.**

Research seminars/conferences
Notice boards advertising research/consultancy and postgraduate opportunities
Existence of Research/Consultancy Units
Areas within the University with national/international research/consultancy reputations

Research posters/exhibitions/displays within the University
Research/consultancy reports produced by the University
Books, journal articles and other forms of research/consultancy output (e.g. images, performances, artefacts, devices and designs) produced by university staff

1.2 ***During your studies at the University have you gained experience of any of the following?*** **Please put an 'X' to the left of all those which apply.**

Hearing a member of staff discuss their research/consultancy work in a module
Hearing a guest lecturer discuss their research/consultancy work in a module
Reading a research/consultancy paper or report written by a member of staff
Critically examining art/artefacts, such as an image, performance, device or design, produced by a member of staff

Attending a University research seminar (not as part of a module)

Attending a research conference

Attending an artistic performance or exhibition linked to your subject area(s)

Being a subject/participant in a research project run by a member of staff (e.g in a study of learning experiences, an examination of exercise in sports,
or a psychological experiment)

Development of research/consultancy techniques (e.g. interviewing, laboratory analysis, performance skills, design skills, statistical analyses, textual analysis, archival search skills, fieldwork skills)

Undertaking an independent project as a part or whole of a module

Undertaking a dissertation or thesis

Being involved in practical activities/fieldwork based on research/consultancy projects

Acting as a research assistant

Contributing to a consultancy project

Contributing to a research conference paper or poster

Contributing to a research paper/consultancy report or other form of research output

1.3 a) Of the academic staff in your subject area(s) approximately what proportion <u>are you aware</u> are engaged in research and/or consultancy? **Please put an 'X' to the left of your answer.**

None 1-20% 21-40% 41-60% 61-80% 81-100%

b) Do you feel that this proportion is different from that in the University as a whole? **Please put an 'X' to the left of your answer.**

Less than Similar More than Don't know

IF YOU HAVE MARKED 'NONE' IN ANSWER TO Q1.3a, PLEASE GO TO SECTION 2

1.4 Which of the following types of research and consultancy activities are you aware that the staff who teach you are engaged in? **Please put an 'X' to the left of all that apply.**

Undertaking a research degree (e.g. Masters/PhD/EdD)
Undertaking non-funded personal research
Undertaking funded research and/or consultancy
Writing for publication

Producing artistic works embodying original research
Supervising research students
Supervising research assistants

1.5 From your experience has the involvement of staff who teach you in research and/or consultancy had a positive impact on your learning in any of the following ways? **Please put an 'X' to the left of all that apply.**

Increased my understanding of the subject
Contributed to the development of my research/consultancy-related skills
Increased my awareness of methodological issues
Stimulated my interest and enthusiasm for the subject

Motivated me to consider pursuing postgraduate research in the same area
Increased my awareness of the problems and issues faced by consultancy clients
Motivated me to consider pursuing a career with a particular kind of consultancy organisation or body

If you have put an 'X' against any of the above please describe ONE significant example of how staff involvement in research and/or consultancy has had a positive impact on your learning

1.6 From your experience has the involvement of staff who teach you in research and/or consultancy had a negative impact on your learning in any of the following ways?

Please put an 'X' to the left of all that apply.

Lack of availability of these staff to see me

Apparent lack of interest by these staff in teaching and facilitating my learning

Apparent lack of interest by these staff in supporting my academic welfare

Apparent inability by these staff to explain material in ways in which I can understand

Their research/consultancy interests distorting the content of what they teach

If you have put an 'X' against any of the above, please describe ONE significant example of how staff involvement in research and/or consultancy has had a negative impact on your learning.

1.7 From your experience to what extent do you agree with the following statements?

On a scale of 1 to 5, please put the appropriate number to the right of each statement, where 1 means 'strongly disagree', *2 means* 'disagree', *3 means* 'neutral', *4 means* 'agree', *and 5 means* 'strongly agree').

	1	2	3	4	5
I have little awareness of my lecturers' research/consultancy interests					
I was aware of the research/consultancy reputation of staff in my subject area(s) when I applied here					

I am not aware of the benefits that the involvement of staff in my subject area(s) in research and consultancy give me as a student

Staff involved in research and/or consultancy are more enthusiastic about their subject

Staff not involved with research and/or consultancy spend more time helping students

I have learnt most when undertaking my own research/consultancy project/dissertation

Insufficient attention is given in the subject(s) I study to developing our research/consultancy skills

The most effective teaching is when the lecturer involves us in aspects of the research/consultancy process (e.g. a problem solving exercise, or writing a research/consultancy bid or paper, or giving a presentation based on our resea

Section 2: Information about you

Please put an 'x' to the left of the categories which apply

2.1 a) Are you registered on: a) Level 3 of the UMS Yes No

OR b) the PMS Yes No

b) If you are registered on the UMS, what are your field(s) of study?

	Major	*Minor*
OR	Joint	Joint
OR	Defined Route/Single subject (please specify)	

c) If you are registered on the PMS, what course are you taking?

2.2 Are you a full time or a part time student? Full time Part time

2.3 Are you male or female? *Male* *Female*

2.4 What was your age at the date of commencement of study at the College/University?

25 and under 26-45 46-60 Over 60

2.5 Name (optional so that we can enter you in prize draw):

Email address:

Section 3: Other information

Is there any other information relating to your experiences as a student at the University of the relationship of teaching with research and consultancy that you think may be of interest to this study? If so, please give details below.

Thank you for completing this questionnaire. Your participation is greatly appreciated. Please now either email it to trcq@glos.ac.uk or put it in the internal University post addressed to Barney Pell, Graduate School, Francis Close Hall.

Appendix 3 Characteristics of responses to student experience questionnaire survey

1. Breakdown of respondents

There were a total of 199 returns. One of these was entirely blank, and two were second submissions by respondents having already entered previously.

196 returns form the data set.

163 from students in the UMS
31 from students in the PMS

81 from male respondents
108 from female respondents

75 from students in Business & Computing (UMS), Business & Management (PMS) or Computing, IT & Multimedia (PMS)
46 from students in Leisure, Tourism, Hospitality & Sport (UMS) or Leisure, Sport & Tourism (PMS)
48 from students in other identifiable subject fields

2. Notes on tables

The sample size for each category (UMS, PMS, male, female etc) is given in its entirety (196) for questions 1.1 and 1.2. Thereafter modifications to 'n' are made according to whether respondents were eligible to complete the particular question and whether they did in fact attempt it.

In questions 1.4, 1.5, 1.6 and 1.7, the sample size decreases globally (from 196 to 156) because 40 respondents indicated in 1.3a that they had no awareness of any academic staff in their subject area being involved in research and consultancy, and were directed straight to Section 2 as a result. If respondents who indicated

'none' in 1.3a did provide responses all the same to questions 1.4, 1.5, 1.6 and 1.7, these were not counted.

Finally, the sample size changes again in 1.7 according as respondents provided responses or left the field blank: wherever no response was given the student was subtracted from the total of eligible respondents.

3. Abbreviations

- B, M & C stands for Business, Management and Computing and incorporates the UMS school of Business & Computing and the two PMS schools of Business & Management and Computing, IT and Multimedia.
- L, T, H & S stands for Leisure, Tourism, Hospitality and Sport and incorporates the UMS school of Leisure, Tourism, Hospitality & Sport and the PMS school of Leisure, Sport & Tourism.
- 'Other' covers all the remaining schools represented by respondents. The table below shows the breakdown of respondents in this category.

3.1 Breakdown of subject area grouping 'Other'

• Education	2	(1 UMS, 1 PMS)
• Environment	9	(7 UMS, 2 PMS)
• Humanities	11	(11 UMS)
• Social Sciences	4	(4 UMS)
• Art & Media	2	(2 UMS)
• Professional Studies	3	(3 UMS)
• Theology & RS	1	(1 PMS)
• Two Schools	16	(16 UMS)

(where students took two joint subjects from two different schools)

4. Breakdown of respondents by school

Total n=196; 2 respondents unidentifiable as UMS or PMS

UMS respondents

coding	school	no.
1	Business&Computing	60
2	Education	1
3	Environment	7
4	Humanities	11
5	Leisure, Tourism, Hospitality & Sport	39
6	Social Sciences	4
7	Art & Media	2
8	Professional & Other	3
9	Two Schools	16
0	*unknown*	*20*
		n=163

PMS respondents

coding	school	no.
1	Business & Management	
2	Education	
3	Geography, Environment & Landscape	
4	Humanities	
5	Leisure, Sport & Tourism	
6	Social Sciences	
7	Art, Media & Design	
8	Theology & Religious Studies	
9	Computing, IT & Multimedia	
0	*unknown*	
		n=31

Appendix 4 Schedule of topics for small-group discussions

1 What do you think is the purpose of universities?

- For the student
- For the academic staff member
- For society

2 How aware were you of the research / consultancy reputations of staff at the University of Gloucestershire when you started here?

3 What do you understand by the terms research and consultancy?

- Independent project
- Dissertation / thesis
- Practical activities / fieldwork

4 What impression of research / consultancy do you receive from tutors or other staff in your subject?

5 In the survey we carried out, the most frequently mentioned problem with staff research / consultancy was lack of availability of tutors. Do you recognise this?

- Unfortunate fact of university life?
- Students should not need so much help?
- Tutors should give over all / most of their time to students

6 Also from the survey, the most frequently quoted positive impacts of stafrf research / consultancy were increased enthusiasm on the part of tutors and better ability to motivate and pass on knowledge to students. Do you recognise this?

- Teaching / curriculum?
- More appropriate teaching methods?
- Involvement in research or consultancy?

N.B. The bullet-pointed prompts were all used where participants did not themselves raise the issues, so that the facilitator made sure that all the questions were at least contemplated by participants.

Appendix 5 Composition of small discussion groups

	Subjects	**Male/ female**	**Academic level**	**Age**
Group 1: 3 participants	1 Business Management & Politics; 2 Sport & Exercise Science	1 male (BM&P) 2 females (S&ES)	3 Level III students	1 mature student (BM&P)
Group 2: 2 participants	1 Computing & Business Computing Systems; 1 Environmental Policy	2 males	2 Level III students	
Group 3: 3 participants	3 Geography	1 male 2 females	3 Level III students	2 mature students (female)
Group 4: 2 participants	2 Sports & Exercise Science	2 females	2 Level III students	
Group 5: 5 participants	1 Computing; 2 Landscape Architecture; 1 English & History; 1 Business Information Technology	5 females	3 Level III students; 2 postgraduates (LA)	1 mature student (BIT)
Group 6: 2 participants *This group not included owing to poor reproduction of interview*	2 Sports & Exercise Science	2 females	2 Level III students	
Group 7: 1 participant *This group not included because one single participant*	1 Sports Development	1 male	1 postgraduate	

Appendix 6 Initial coding for themes to be investigated in small-group discussions

Main themes	Sub themes
1. Roles of universities	a) For students b) For society c) For staff
2. Awareness	a) Of r/c seminars or conferences, notice boards, posters, exhibitions or displays b) Of r/c work going on c) R/c reputations (inc. before coming) d) Of books, artefacts, reports or other r/c outputs e) General awareness of r/c phenomenon
3. Student Involvement	
Passive	a) Hearing r/c discussed in lectures b) Reading r/c reports, papers or books c) Research method training d) Guest lecturers
Active	a) Dissertation, independent project or fieldwork b) Participant in staff research or contributing to University r/c d) Attending r/c seminar or conference
4. Positives	a) Staff enthusiasm b) More or more relevant knowledge c) Improvement of course content e) Good for University g) Benefit for student's own work
5. Negatives	a) Availability b) Lack of communication between staff – students c) Course content d) Effects on teaching e) General negative remarks f) R/c not relevant to undergrads

Suggestions that students make on improving the r/c-t link or improving their learning experiences at the University of Gloucestershire will be treated separately and emerge through analysis of the other coding categories.

Appendix 7 Extra notes on data analysis

1. When working with the transcripts of the five discussion groups I analysed the discourse at the level of the *extract*. This was taken to mean an utterance, or set of exchanges that satisfied one of the coding categories above.

2. The coding categories were designed to capture all relevant aspects of the student learning experience in relation to research and consultancy. They were decided on through a) a reading of the literature pertaining to the previous student-centred research studies, b) ensuring the research questions were covered, c) analysis of the student experience questionnaire data and d) drafting with colleagues and then conducting a pilot discussion group to test them.

3. Extracts are usually short (1–8 lines of text). Longer extracts occur when the conversation evolves densely around a particular topic. All extracts were immediately edited for anonymity of participants and those referred to, for filler sounds like 'Um', 'Aah' and for repetition in whole or part of words where this was due to hesitancy or interruption.

4. Subsequently the coding categories were changed as it became clear that the data relating to student awareness of and involvement with research and consultancy did not fit usefully with the fine distinction made, e.g. between, **2d)** Of books, artefacts, reports or other r/c outputs and **3b) Passive** Reading r/c reports, papers or books, and that the data relating to positive or negative beliefs and experiences contained nuances that would not be captured without expanding three of the category descriptors and adding three besides. Finally, two were conflated (**5c & 5d**) and the coding was complete.

5. The extracts were assigned to files containing all those belonging to the same coding category as arrived at after step 4 (above). Some extracts were assigned to more than one file where their content satisfied more than one coding category.

6. Analysis proceeded by summarising the data contained in each coding file. This involved providing a text explanation of the relative significance of each sub-category of extracts, e.g. **4b** is at once a much larger and more meaningful sub-category than **4d**, both in terms of frequency of occurrence and of depth of reflection evidenced. This process calls for judgements of quantity and quality of the data to be made.

7. At this stage the findings of the student experience questionnaire and small-group discussion methods are brought together and compared. This comparison drives the narrative of results chapters four and five as student participants illustrate and explain aspects of their experience picked up originally in the questionnaire. The overall findings of this analysis are summarised and integrated in chapter six (Implications and Conclusion) to obtain an overall impression of student's learning experiences in relation to research and consultancy.

Appendix 8 Final coding of extracts as developed throughout data analysis

Main categories	Sub categories
1. Roles of universities	a) For students b) For society c) For staff
2. Student Awareness	a) Of r/c seminars or conferences, notice boards, posters, exhibitions or displays (i.e. peripheral awareness) b) Of r/c work going on, of particular researchers/ consultants c) Of r/c reputations (inc. before coming) d) Of books, artefacts, reports or other r/c outputs e) General awareness of r/c phenomenon or academic practice f) Hearing r/c discussed in lectures g) Guest lecturers
3. Student Involvement	a) Dissertation, independent project or fieldwork b) Participant in staff research or contributing to University r/c c) Attending r/c seminar or conference d) Reading r/c reports, papers or books e) Research method training
4. Positives	a) Staff enthusiasm or helpfulness b) More or more relevant knowledge c) Improvement of course content d) Links with outside world e) Good for University f) General positive remarks g) Benefit for student's own work or employment
5. Negatives	a) Availability b) Lack of communication between staff – students c) Effects on teaching/ teaching materials d) General negative remarks e) R/c not relevant to/ open to/ known of by undergrads

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