TEACHING GROUPS AS CONTEXTS FOR LEARNING ABOUT TEACHING IN HIGHER EDUCATION

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Abstract

This research proposes a new concept, called *teaching groups*, as approach to learning about teaching for academics in higher education. Teaching groups are defined at the outset of the research as groups of academics who have, based on their positions in their institutions, shared responsibilities in teaching. To build a theoretical foundation, the community-based approaches of communities of practice and (faculty) learning communities are investigated and links to teaching groups established. In an important departure from existing community-based approaches, the idea of voluntary participation is abandoned and, in contrast, membership in teaching groups is by default. The motivation for this step is to overcome the low participation rates in activities related to learning about teaching, ultimately aiming at participation of the vast majority of academics.

An exploratory mixed-methods research design was employed. The first, qualitative research phase was conducted using focus groups. The aim of this research phase was to explore how academics relate to the concept of teaching groups, what interactions take place in these groups and how engagement with teaching, and learning about teaching, might be facilitated in the groups. Based on the results of the focus group research, hypotheses and goals for investigation in the second, quantitative research phase were developed. A survey was conducted via a questionnaire, aiming at confirmation of key findings of the first research phase.

The findings across both research phases show that nearly all participants could identify and describe their teaching groups. Characteristics of teaching groups were determined and a classification into a scale from tight-knit to individualistic teaching groups was derived. The results show that tight-knit teaching groups provide academics with a community environment highly supportive of learning about teaching, whereas members of individualistic teaching groups miss out on valuable opportunities for learning from and with each other. About 40% of the teaching groups discussed in this research were classified as tight-knit,

indicating that the remaining majority of teaching groups would benefit from improvements.

Setting the findings in context to the situation of teaching in higher education, recommendations were made to strengthen line management with regard to teaching and to officially acknowledge the existence of teaching groups. The research comes to the conclusion that teaching groups form a promising concept for learning about teaching in higher education. Future research will need to investigate the reasons why teaching groups develop certain characteristics and what could be done to help teaching groups to move along the scale from individualistic to tight-knit teaching groups.

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Chapter 1

Introduction

This chapter starts by outlining the context and motivation for this research, supported by presenting some high-level findings from the literature. This is followed by a personal introduction of the researcher, describing her background in higher education and the experiences that have formed her interest in this research. After outlining some of the terminology used in this thesis the term *teaching groups* is defined.

1.1 Context and Motivation for the Research

Over the last twenty years, the context of higher education has changed. There has been a shift from teaching to research (Billot, 2010), funding, in relative terms, has decreased (Lomas, 2006) and participation has widened (Brew, 2010b). The widespread availability of information technology, both in form of specialised e-learning tools and generic Internet-based communication technologies, has provided many new opportunities (Bradmore & Smyrnios, 2009; Kenny, 2009). Academics in higher education are faced with many challenges: how to divide time between research and teaching; how to cope with increased teaching loads and decreasing levels of support; how to address students from a wide variety of backgrounds; how to make the most of new technologies. While learning about *how to teach* and to continuously strife for improvements in one's teaching skills have always been demanding, today's higher education context compounds the challenges for academics in higher education.

The vast majority of academics in higher education do not have formal qualifications in education (Cilliers & Herman, 2010). Academics are subject experts

who are foremost grounded in research and not in teaching (Ginns, Prosser, & Barrie, 2007). To support the development of teaching ability and the acquisition of pedagogical knowledge, several approaches are available to academics: study towards a formal qualification such as a certificate, diploma or degree; participation in non-formal learning such as academic development programmes offered by their institutions; informal learning in the form of self-study or in interaction with colleagues and the wider academic community. Research shows that only a small minority of academics takes up the first two options, study towards formal qualifications and participation in academic development programmes (Hanbury, Prosser, & Rickinson, 2008; Lucas, 2000).

The higher education sector has recognised the need for academics to engage with their professional development in teaching (Young, 2006). One of the measures launched in the 1990s to encourage such engagement was the introduction of teaching awards, which exist in two main forms: as rewards of excellence, and as grants for development. Research shows that these awards only have limited impact on the higher education sector (Halse, Deane, Hobson, & Jones, 2007). Some groups in higher education propose an approach called Scholarship of Teaching and Learning (SoTL). SoTL suggests a research informed approach to teaching that is to formally investigate one's teaching (Carew, Lefoe, Bell, & Armour, 2008). An important component of SoTL is the sharing of reflections about teaching with academic colleagues. By practising SoTL, academics actively work towards improvements in teaching. Communities of practice, as described for example by Wenger (1999), have become very popular since the 1990s. In these communities self-motivated individuals share information, discussions and reflections. Communities of practice have the potential to be beneficial for developing teaching skills (Carew et al., 2008; Laksov, Mann, & Dahlgren, 2008; Viskovic, 2006). Faculty learning communities provide another academic development approach that has become popular since the 1990s. Within these communities academics come together to explore practice and deepen their knowledge about teaching (Nugent et al., 2008; Schlitz et al., 2009).

The problem for the higher education sector is that all these measures and approaches, namely the formal, non-formal and informal development opportunities, the teaching awards, SoTL, the communities of practice and the faculty learning communities, only attract a minority of academics. While there is no shortage of opportunities to engage with teaching and professional development

in teaching, the majority of academics engages only in limited form or does not participate. Considering that teaching is one of the two core responsibilities of most academics this lack of engagement is of concern.

The aim for this research therefore is to explore ways to improve teaching knowledge across academics in higher education. The hope is to ultimately include the majority of academics, even academics who traditionally engage only in limited form, in the development of their teaching knowledge and in increased sharing about and reflection on teaching.

1.2 Background of the Researcher

The following personal statement introduces the author of this research.

"I am an academic at a New Zealand university where I teach courses in computer science and information technology and undertake research in areas such as e-learning, assessment, lifelong learning and higher education.

Like many other academics I entered academia via the research path. After working as a research assistant and completing a PhD in Information Systems I obtained a position as lecturer. To cope with teaching, I drew on my own experiences as student and sought advice from selected colleagues. I attended short courses provided by the academic development unit of my university. While these courses rarely provided answers to my questions about teaching, they usually delivered assurance that the challenges I faced in teaching were shared by others.

My deeper interest in teaching, and subsequently higher education research, evolved via my research in e-learning. In accordance with my subject area background, I initially approached this research from the technology side. Yet, I quickly learned that successful e-learning tools require strong pedagogical foundations. This led to reading and learning about pedagogy and thinking more deeply about teaching and learning. The contact with higher education researchers and academic developers, at conferences or seminars, opened new perspectives, exposing me to different approaches to teaching than I had either experienced myself as student or had heard about in talking with my colleagues.

Conducting research in e-learning and the other areas mentioned, has affected me in several ways. I have not only become a better teacher, but also have had the opportunity to observe others and to research teaching approaches of numerous colleagues. This has provided me with the privilege to learn about

excellent approaches to teaching. Yet, I have also seen reluctance to take on new teaching approaches and tools, and have gained insight into the challenges faced by academic developers in engaging and supporting academics.

Over the last fifteen years, I also had opportunity to observe and experience the pressures academics face. Research, and the demand for research outputs, dominate the climate in higher education. The quality of the academic's working life is highly dependent on securing research funding. Recognition for teaching excellence is hard to come by. Resources for teaching support are scarce and the number of regulations the academic has to comply with are increasing. Collegial exchanges are diminishing as academics race to fulfil their research, teaching, service and administrative obligations. I have seen academics coping well with these demands, but have also met others who were struggling and were close to breaking point.

On a personal level I have experienced the benefits of deeper engagement with teaching, via literature, courses and exchange with others, on my teaching and support of student learning. I have discovered the rich resources available to academics to assist with professional development in teaching and learning. I have seen academics who are willing and able to make time for teaching, and learning about teaching, but have also observed others who cannot cope with the demands or who seem satisfied by investing only a minimum effort into teaching.

Many conversations among academic colleagues focus on the pressures stemming from today's situation in higher education and management in institutions. I acknowledge these pressures, but also think that it is time for academics to assert more influence on the directions academia takes, by working together towards re-balancing the values of the sector towards teaching.

These considerations have motivated this research into a new direction for professional development of academics in teaching and learning that builds on exchanges among academics and strives to encompass all academics involved in teaching."

1.3 Comments on the Use of Terminology

This thesis is concerned with teaching in higher education. It looks at the engagement of academics with their teaching, the interactions between academics about teaching and the further development of teaching skills, knowledge and practices.

The research behind this thesis focuses on potential improvements in teaching, based on an increased understanding of what good teaching entails and how good teaching can be implemented in practice. For the purpose of this research, there is less interest in exchange about teaching that occurs on administrative or organisational instead of pedagogical levels.

In the thesis, the expression *learning about teaching* is used to relate to any activities or thought processes of academics directed at furthering their understanding and knowledge of pedagogy and teaching with the ultimate aim of improving their ability to assist student learning. Where the thesis uses expressions like *engagement with teaching* or *interactions about teaching* the focus is on *how* rather than on *what*.

Being an academic requires personal and professional development in a range of areas. This thesis focuses on professional learning and development for teaching and does not consider development related to other areas of academic life. Historically, support for professional development in teaching in higher education has been referred to as academic development support. Support units have often been called academic development units and individuals employed at a university tasked with supporting academics in their teaching professional development are referred to as academic developers. While the term *academic development* does not emphasise the focus on professional development in teaching, it is still used in this thesis for reasons of familiarity and as it matches the literature in this area.

1.4 Definition of the Term Teaching Groups

Academics in higher education are appointed to positions within universities that relate to subject areas and administrative structures. For example, an academic might be appointed as a lecturer within the finance department of a university, with the requirement to teach within the various finance programmes offered by the university. The academic will be expected to work closely with colleagues appointed to the same group who will be teaching within the same programmes. Besides the choice of accepting an appointment to a specific university or not, the academic will have limited opportunity for selecting the colleagues to teach with. The directions for the teaching programmes will be set by the group in line with discipline and university requirements. While the individual academic can contribute to the decision-making process and can influence the implementation

of the teaching programmes, the delivery of a coherent programme will take precedence over individual preferences. Quality and reputation of the teaching programme will depend on the contributions of all members of the group.

In contrast, the situation in research is different. In research, academics are much freer in choosing research partners. These partners can be located in the same subject area or can come from other subject areas. They can be at the same or at a different institution. Individual academics, together with their chosen research partners, can determine their own research directions, set goals and choose methods to achieve these goals.

The focus of the research reported here is on investigating how the local context of academics in their positions in higher education institutions could be used to understand and influence the engagement with teaching and learning about teaching. The term *teaching groups* has been coined to refer to this local context. The intention is to define the term and its meaning in this research to create shared understanding in the research community.

Traditionally, it is common in higher education to structure universities into faculties or colleges, and these in turn into departments. Other approaches common today are to form schools, either at university or college levels, and to subdivide schools into institutes. On the next smaller level of division, terms such as clusters or groups might be used. Even within one university, the various areas might be structured differently. This diversity provides one motivation for forming the term teaching group. The intention is that research participants use the definition and map it against the structures and terminologies of their own organisations and sub-groupings.

A second motivation behind defining the term teaching groups is based on the fact that different institutions, or even sub-groupings within these institutions, use different organising principles for the formation of units. Traditionally, universities are structured according to subject areas. These subject areas form teaching areas. Teaching programmes and organisational structures are well aligned. More recently, it has become popular to structure according to research areas, grouping academics with related research interests. This leads to multidisciplinary groupings that often do not align with teaching programmes. The term teaching groups puts the focus on groups of academics who teach together, independent of membership of these academics to organisational units.

An important aspect of this research is that teaching groups are not special interest groups an academic might have chosen to interact with on a voluntary basis. The assumption is that every academic with a teaching obligation will be part of one or several teaching groups. A conceptual framework is developed and presented in Section 2.5 that sets teaching groups into context of concepts discussed in the literature. As the research progresses, the definition of teaching groups is refined in consultation with research participants.

1.5 Chapter Outline

The thesis is structured as follows. Chapter 2 introduces the literature review and develops the conceptual framework of the thesis. It states the research objectives and questions. Chapter 3 focuses on the theoretical framework of the research. It explains the theoretical underpinning of the work and introduces research methodology and methods. Chapters 4 and 5 provide the findings of the focus group and survey research phases. Chapters 6 and 7 discuss these findings and provide conclusions.

Chapter 2

Literature Review

The following sections present the literature reviewed to ground this research in existing knowledge. The literature review is based on journals, books and other publications from the English speaking Western countries of New Zealand, Australia, the United Kingdom and North America.

The situation of higher education, in a complex and changing world, is explored first, with the attention then shifting to the impact on teaching. Measures to address the needs of teaching and of academic development in teaching are outlined. Guided by the directions proposed for this research that suggest looking at learning about teaching in a community context, relevant learning theories are reviewed. A closer examination of approaches to academic development that are based on communities, either by forming a community or by supporting the individual within a community context, is presented. Based on the literature reviewed a conceptual framework for this research is developed.

2.1 Current Context of Higher Education

Since the early 1990s, higher education has undergone considerable changes that have been triggered by a variety of outside influences (Archer, 2008; Bolden, Petrov, & Gosling, 2009; Bradmore & Smyrnios, 2009; Brew, 2010b; Briggs, 2005; Crawford, 2008; Gray & Radloff, 2008; Kenny, 2009; Lucas, 2000; Waitere, Wright, Tremaine, Brown, & Pause, 2011). Student numbers have grown substantially, leading to a mass education system (Brew, 2010b). The funding per student has decreased (Lomas, 2006). Increasing student numbers and widening participation have brought students from non-traditional backgrounds to universities

(Hardy, 2010). Increased student heterogeneity poses new demands for institutions (Lomas, 2006; Stigmar, 2008). Academics face increased challenges teaching these students, who might be less prepared than students in the past, especially as resourcing for teaching is stretched (Hardy, 2010).

Globalisation and internationalisation have led to strong international competition (Bradmore & Smyrnios, 2009; Brew, 2010b; Kenny, 2009). A competitive market place has developed, where new providers offer alternative, non-traditional courses (Bradmore & Smyrnios, 2009). The higher education sector faces fierce competition for resources (Brew, 2010b). Higher education institutions face increasing government pressure (Lomas, 2006), and heightened public accountability and scrutiny (Bradmore & Smyrnios, 2009; Brew, 2010b; Kenny, 2009; Malcolm & Zukas, 2009; Meyer, 2007). Public funding for teaching in higher education is under threat, as the announcement of 40% funding cuts for higher education in the UK of October 2010 demonstrates[1].

As a reaction to these outside influences and pressures, universities have undergone wide-reaching changes over the last two decades. The institutional culture in higher education has undergone a transformation from collegialism to managerialism (Archer, 2008; Bolden et al., 2009; Brew, 2010b; Kenny, 2009; Lomas, 2006; A. Skelton, 2004; Waitere et al., 2011). There has been a move from a traditional university model of debate and collegial decision making to managerial and business models (Meyer, 2007). Universities have lost the appreciation of plurality (Churchman & S. King, 2009). The shift from collegial to corporate culture has caused a shift of power to the centre (Lomas, 2006) and has led to a loss of personal and institutional autonomy (Robson, 2006). The climate of change had effects on the professional identity of academics (Harvey & Kamvounias, 2008). Academics, historically seen as a community of scholars, have experienced significant shifts in their roles and responsibilities (Billot, 2010). The critical input of academics as leaders and guardians of academic values into decision-making has diminished (Kenny, 2009). With the advent of managerialism academics have lost influence and power to policy makers and management (Waitere et al., 2011). Changing employment practices, with increased part-time employment and short-term contracts (Chalmers, 2011), make it harder for academics to have an holistic view of academic work and to develop a sense of collegiality.

[1] http://www.insidehighered.com/news/2010/10/21/britain

The changes in the sector have affected teaching and research as well as the relationship between these core domains of academic work. Academics are under increasing pressure to account for research outputs (Waitere et al., 2011). Research assessment systems, like the Performance Based Research Funding (PBRF) system practised in New Zealand, that measure the individual productivity of academics, further increase the negative impact on collegiality and mutual support (Billot, 2010; Waitere et al., 2011). As funding is limited, academics compete with each other for resources and are less inclined to co-operate (Billot, 2010). The tensions between research and teaching have increased (Billot, 2010). Instead of growing together, the two areas have been further separated (Malcolm & Zukas, 2009).

The approach of measuring the quality of research outputs stands in contrast to the approach commonly applied in teaching, where funding follows a model of participation (Young, 2006). Yet, changes are underway in calculating funding for teaching. Models based on course completions instead of just enrolments have been proposed (Tertiary Education Commission, 2010) and subsequently introduced. There is an increasing focus on excellence in teaching, introducing a 'culture of measurement', with negative connotations of focusing on techniques while neglecting the context of practice and human relationships (Fitzmaurice, 2010). While accountability has brought with it a new visibility for teaching, it has also led to competition between units with detrimental effects on collaboration (Jauhiainen, Jauhiainen, & Laiho, 2009). In the context of accounting for teaching quality, teaching and learning strategies have been developed since the late 1990s. Analysis has shown that these documents have been written from a managerial perspective, failing to place academics at the centre, instead appearing 'impersonal and institutionally power-laden'(K. Smith, 2008, p. 405).

With regard to teaching, academics face a difficult situation. Academics are expected to teach, despite having little experience and generally no teaching qualifications (Cilliers & Herman, 2010). Most academics have never been taught to teach, or to be reflective about their teaching (Lucas, 2000). Teaching is often seen as a private matter (Robson, 2006). Partly, this is caused by the pressures in universities today that lead to competition instead of collaboration (Jauhiainen et al., 2009). Despite the challenges surrounding teaching, there are intrinsically motivated academics, who are trying their best for their students (Hardy, 2010).

They show personal commitment to teaching, yet are upset by the lack of recognition they receive (Young, 2006).

Increasingly, academics need to demonstrate the outcomes of their teaching (Devlin & Samarawickrema, 2010).The danger is that universities measure the wrong constructs. While efficiency gains might have been achieved, it is questionable if effectiveness has improved (Kenny, 2009). An analysis of teaching philosophy statements of academics, who had undertaken a postgraduate certificate of teaching and learning, showed a focus on methods and improving effectiveness. What was seen as lacking was an emphasis on the moral and ethical aspects of teaching (Fitzmaurice, 2008).

Linked to the demands for accountability, work allocation formulas have been developed to model academic workloads. These systems have not been able to measure actual workloads or to prevent inequalities between academics and have led to a further deepening of the separation between research and teaching (Malcolm & Zukas, 2009). Even where workload allocation models have been found to create fair allocations, they cannot address the problem of workloads being too high (Vardi, 2009).

Internet-based communication technologies dominate technological change and require strong responses from educational institutions (Bradmore & Smyrnios, 2009; Kenny, 2009). Teaching has been under increasing pressure to make use of information and communication technologies. Academics generally welcome the new technologies but are not always able to use these to improve learning (Hardy, 2010). Even with institutional support, uptake of new technologies requires high levels of effort, which often does not translate into rewards for the academic (Young, 2006). The increased use of information technologies for communication contributes to the isolation many academics experience (Churchman & S. King, 2009).

Occupational stress and depression among knowledge workers in general has been compared against the situation experienced by academics. It has been found that academics, like other knowledge workers, face various forms of stress, causing negative impact on mental health (Ditton, 2009). A number of academics experience counter productive stress that is based on quantitative and qualitative work overload and an imbalance and lack of control over effort and reward. Systemic stress is linked to the immediate work environment of academics with its negative social processes. Social relationships have been fragmented and individualism has

developed. In many groups, environments within teams are no longer supportive, collegial relationships are poor, academics perceive being critically watched by colleagues and feel the need to be on guard, and management approaches have replaced reliance on peer support (Ditton, 2009).

2.2 Dominance of Research over Teaching

Academics experience pressure in all areas of their professional responsibilities. This applies to the two core areas of research and teaching with the demands for research outputs and high quality teaching, but as well for the additional areas of administrative and service requirements (Kamvounias, McGrath-Champ, & Yip, 2008). Despite the importance of teaching for student learning, higher education is clearly dominated by a focus on research, with teaching experiencing a lower status than research (Carew et al., 2008; Cashmore & Ramsden, 2009; Chalmers, 2011; Ginns, Kitay, & Prosser, 2010; Greenbank, 2006; Harris, 2005; Jauhiainen et al., 2009; Laksov et al., 2008; Lea & Callaghan, 2008; Light & R. Cox, 2001; B. L. Smith, MacGregor, Matthews, & Gabelnick, 2004; Young, 2006). The situation in higher education contributes to the divergence of teaching and research (Ahlberg, 2008).

Academics perceive that teaching is regarded as a lower ranked activity than research (Chalmers, 2011; Jauhiainen et al., 2009). The pressure to produce the higher valued research outputs means that less time is invested into teaching (Lea & Callaghan, 2008). Not only is research in general valued higher than teaching, it is also reported that only subject-based research is of high value, with pedagogic research receiving little recognition (Macfarlane, 2011; Robson, 2006). While academics form strong networks with regard to research the same cannot be said for teaching (M. Cox, 2004). Where academics form research groupings, they are experienced as collegial and discursive. In contrast, groupings formed for teaching focus on business and organisational issues (Crawford, 2010). The different characters of these networks indicate that academics can draw on more valuable support networks for research than teaching.

Academics feel that their career advancement and promotion depend on their research outputs with teaching being given less value (Jauhiainen et al., 2009; Lea & Callaghan, 2008; Young, 2006). Some academics even go as far as saying that striving for excellence in teaching can damage promotion chances (Young, 2006).

Academic promotion is based on research and teaching is given comparatively little value (Greenbank, 2006). It has also been reported that only a minimum level of teaching performance is required for promotion (Young, 2006).

One impact of this situation is that it is difficult to engage academics in development of teaching if they are under the perception that furthering their teaching knowledge will not contribute to their promotion chances (Gray & Radloff, 2008). While official promotion documents contain teaching as one pathway, teaching is still seen as inferior when compared to research (Cashmore & Ramsden, 2009; Young, 2006). There are inconsistencies in specifying promotion criteria based on teaching excellence, and senior promotions based on teaching excellence are rare (Cashmore & Ramsden, 2009). It is difficult to obtain information on how policies in support of promotion by teaching excellence are implemented in practice (Cashmore & Ramsden, 2009).

Newly appointed academics view themselves as researchers and not teachers (Warhurst, 2006). This is a logical consequence from, in many cases, coming straight from a heavy research focus in working on their doctorates and from being aware of the research dominated value system in higher education. In some systems postgraduate students solely focus on research and do not have the opportunity to be involved in teaching (Jauhiainen et al., 2009). Academics face difficulties responding to increasing calls for teaching quality, as they are traditionally educated with a stronger focus on research than on teaching (Ginns, Prosser, et al., 2007). Researchers have reported that academics fail to understand the complexities inherent in teaching and learning and do not see the relevance of these concepts for teaching practice (Kandlbinder & Peseta, 2009). The focus on research in the process to becoming an academic and the lack of teaching training are likely reasons for these failures.

2.3 Addressing the Situation of Teaching

As outlined in the previous sections, the higher education sector has been under pressure for the last two decades to address teaching quality and status and account for outcomes. While there are numerous examples of successful interventions, the overall situation is dominated by reports concerned with the situation of teaching in higher education. Academics are under performance pressures,

research dominates academic life, teaching is undervalued, student numbers are high and resources limited.

The sector has responded with a range of measures designed to lift the status and quality of teaching and provide accountability. Centres for higher education and excellence in teaching and learning have been established and charged with leading change towards increased support and higher recognition of teaching. Awards and fellowships for teaching excellence have been introduced on both institutional and national levels. Professional development programmes leading to formal qualifications in teaching in higher education are being offered. It has been attempted to lift the status of teaching by strengthening the connections between teaching and research and by conducting research into pedagogy and teaching in higher education. Professional development approaches based on communities of academics have been investigated.

The following sections explore these measures and conclude with an evaluation of their effectiveness. Recommendations for future advancements from the literature are presented and conclusions for this research are drawn.

2.3.1 Research Linkages and Scholarship of Teaching and Learning

The most commonly used terms for describing the connections between teaching and research are *research-led teaching* and the *research-teaching nexus*. There are no clear definitions of what these terms mean, with a variety of interpretations being used. Visser-Wijnveen, Van Driel, Van der Rijst, Verloop, and Visser (2010) suggest a number of ways to understand the nexus. The authors name teaching of research results to transfer current knowledge to students, stimulating research thinking in students and initiating enthusiasm for research, imparting research skills, and providing students with opportunities to participate in research. Brew (2010a) distinguishes between research-enhanced teaching and research-based learning. The former focuses on integrating research findings into teaching, the latter on engaging students in research to develop their research and inquiry skills.

One motivation for integrating research and teaching stems from the need to equip students for the rapidly changing and fluid world of today. Students need to be prepared for the future (Senge, 2000). More than static knowledge,

they need skills of enquiry (Brew, 2010a). Another motivation for bringing research and teaching closer together is to enhance the standing of teaching and to improve teaching. A. M. Skelton (2009) calls for a new conceptualisation of teaching excellence that includes intellectual curiosity and suggests that this can be achieved by looking at research and teaching in combination. It is reported in the literature that academics are interested in improving teaching facilitated by closer integration with research (Karagiannis, 2009). The thought is expressed that research active academics will be more enthusiastic teachers and that high level researchers attract the best students (Schapper & Mayson, 2010). As these references indicate, a closer integration of teaching and research is expected to result in improvements for teaching and learning. Institutions strive for closer linkages in recognition of this expectation. Yet, despite best efforts, they tend to create structures that deepen the separation between research and teaching (Schapper & Mayson, 2010).

Issues have been identified that make closer integration difficult. Research interests and teaching obligations of academics do not necessarily overlap (Ahlberg, 2008; Karagiannis, 2009; Schapper & Mayson, 2010). Research continues to be valued higher than teaching and based on workloads, academics are not necessarily able to focus on both areas (Schapper & Mayson, 2010). Bringing the research and teaching communities within an institution closer together is a slow, gradual process that requires strong leadership and commitment (Brew, 2010a).

The concept of the Scholarship of Teaching and Learning (SoTL) provides another avenue for advancing teaching in higher education. SoTL has its origins in the work titled 'Scholarship Reconsidered: Priorities of the Professoriate' published by Boyer in 1990. At the core of Boyer's work is the classification of scholarship as discovery, integration, application and teaching. In some academic circles SoTL has developed a high profile. This is evident by the founding of academic journals dedicated to SoTL, like the Journal of the Scholarship of Teaching and Learning (JoSoTL)[2], or societies like the International Society for the Scholarship of Teaching & Learning (ISSOTL)[3].

The SoTL movement aims at improving teaching by applying a research approach that puts teaching on a solid pedagogical foundation and evaluates its effectiveness with regard to student learning. It also attempts to address the

[2] https://www.iupui.edu/~josotl

[3] http://www.issotl.org

issues around recognition for teaching excellence by providing a pathway for academics parallel to that focusing on subject area-based research. The movement has had an impact on the recognition of teaching excellence. Criteria specifying teaching excellence have been defined and promotion guidelines rewritten. New reports show that these changes now make it possible, in many institutions, to achieve promotion, including to senior levels, based on teaching excellence (Vardi & Quin, 2011). SoTL approaches have been implemented and resulted in positive changes in behaviour and culture with regard to teaching (Adcroft & Lockwood, 2010). It is emphasised that creating trust and collegiality are important factors in achieving these changes.

Yet, there are also numerous accounts critical of SoTL. The criticisms start with the lack of clarity about the concepts of SoTL (Chalmers, 2011; Kinchin, Lygo-Baker, & Hay, 2008; Vardi & Quin, 2011). Boshier and Yan (2008) describe SoTL as a problematic concept. Part of their reasoning is that SoTL separates teaching and learning instead of focusing on a unitary process that builds on pedagogy. Learning should be looked at as process instead of focusing on outcomes. The authors write that SoTL does not address the challenges around competitiveness and lack of collegiality posed by today's climate in higher education. Further, SoTL is criticised for its focus on formal learning settings, disregarding the importance of learning in non-formal or informal settings (Boshier, 2009).

Looking across higher education, SoTL has been limited in its uptake. Haigh, Gossman, and Xiaomin (2011) have measured the proportion of SoTL publications among research publications across three New Zealand universities. They have identified the share of SoTL publications as a fairly low 3.6%. Vardi and Quin (2011) see the potential benefits of SoTL, but call for work on better conceptualisation to facilitate uptake. Boshier (2009) sees several reasons for the lack of inroads of SoTL. Named are the lack of clarity of definitions and the resulting difficulties in defining and applying criteria, for example in promotion contexts. SoTL suggests research into teaching and the application of the research outcomes to demonstrate impact. According to the author, this sets a very high bar, not necessarily demanded from other research areas, where practical outcomes often are only apparent much later. According to Ginns et al. (2010), academics are of the opinion that achievements in SoTL are of lower value than research outputs in disciplinary research, leading academics to focus on disciplinary research to the detriment of engagement with SoTL.

2.3.2 Academic Development Approaches

Academic development approaches focus on the professional learning of academics about teaching. The earlier sections of this chapter have illustrated the challenges for teaching in higher education, including the dominance of research, the pressures on time and resources, and the research grounding of academics. In light of this background, it is easy to see that academic development is a difficult task. This section reviews aspects of academic development important for understanding what is trying to be achieved, the approaches used, successful settings and possible outcomes.

While the beginnings of academic development in higher education date back more than 40 years (Grant et al., 2009), it is an area that is still very much under development. Carew et al. (2008) talk about academic development as an emerging discipline that is undergoing a transition from sole focus on provision of service to a mixed mode including service and theory components. The authors name as a theoretical basis of academic development the scholarship of teaching, reflective practice, critical reflection, collegiality and academic self perception.

Academic development goes beyond focusing on teaching techniques (Stigmar, 2008). A central aim of academic development programmes is to affect a transition from teacher-centred to student-centred approaches (Angelo, 2000; Stes, Coertjens, & van Petegem, 2010), from transmission of factual knowledge to a focus on knowledge production processes (Postareff, Lindblom-Ylonne, & Nevgi, 2008). Such transition is said to have a positive effect on teaching quality, as there is a link between teacher conceptions and approaches and learner behaviour, leading to improvements in student learning (Ginns, Kitay, & Prosser, 2008). Teachers' conceptions of teaching influence their approaches to teaching. These in turn influence students' approaches to learning and subsequently students' learning outcomes (Kember, 2009). The language of pedagogy that academic development offers is important, as it makes available new ways of discussion and thinking, as compared to what normally occurs in departments (Warhurst, 2006).

Education encompasses formal and non-formal programmes as well as informal learning. Formal education is characterised by curricula and formal qualifications, non-formal education still features systematic instruction but requires only sporadic engagement, while informal learning centres around reflection and learning from experiences (Foley, 2004). Academic development takes place in formal and non-formal education and also via informal learning. In recent years,

many higher education institutions have introduced formal qualifications related to teaching in higher education (Robson, 2006). These qualifications are mostly offered on postgraduate level as certificate or diploma programmes, undertaken part-time over a duration of one to four years. Examples for courses are the Postgraduate Certificate in Higher Education offered by the University of Otago in New Zealand [4], the Postgraduate Certificate in Tertiary Teaching by Massey University in New Zealand[5], or the Postgraduate Diploma in Professional Studies in Education by the Open University in the United Kingdom[6].

Non-formal learning opportunities include workshops, seminars and lectures. These learning provisions are an integral part of academic development work (Knight, Tait, & Yorke, 2006). Yet, the success of these provisions in affecting change leading to meaningful learning is fairly low (MacDonald, 2001). Of specific importance to professional development are informal approaches (Knight et al., 2006). Informal, experiential learning is seen as the most important factor in developing expertise in, and understanding of, teaching (Viskovic, 2006).

Academic development should play a role in providing opportunities for informal learning (Knight et al., 2006) and should assist with integration into authentic practice (Warhurst, 2006). Contact with other academics and everyday conversations are important for the professional development of the academics (Staniforth & Harland, 2006). Academic development work builds on reflective practice in a collegial environment, in which both peers and academic developers play an important role. A partnership between developers and academics with a theoretical basis of collegiality is important (Carew et al., 2008). Participating academics welcome the collegial environment fostered by academic development (Bryman, 2007). Research with graduate teaching assistants has shown that these new academics learn more from their informal networks than from courses (Wise, 2011). Being part of a social collective, as might be available through a academic development programme, is of special value during periods of transition (Clegg, McManus, Smith, & Todd, 2006) and induction (Staniforth & Harland, 2006).

[4] http://www.otago.ac.nz/courses/qualifications/pgcerthighe.html

[5] http://www.massey.ac.nz/massey/learning/programme-course-paper/programme.cfm?prog_id=93159

[6] http://www3.open.ac.uk/study/postgraduate/qualification/d52.htm

While providing a variety of valuable programmes, academic development struggles with uptake of their offerings. The participation of academics in academic development programmes is relatively low (Hanbury et al., 2008). Academics with the most teacher-centred beliefs and approaches are least likely to enrol (Kember, 2009). Academic development events are poorly attended by those who need them most (Lucas, 2000). This is unfortunate, as an improvement in the practice of the weakest teachers would make a big difference to the experience of students and to the reputation of the institution (K. Smith, 2008). The participation of senior academics is much lower than that of junior academics (Ahlberg, 2008; Robson, 2006). To address these issues, it is now a requirement for new lecturers to participate in formal or non-formal academic development programmes at an increasing number of institutions (Robson, 2006).

To obtain a clearer insight into the uptake of formal academic development programmes, the researcher of this thesis has analysed the official 2011 staff listings provided by three New Zealand universities, looking for formal qualifications related to teaching. When excluding academics in education colleges or departments, this analysis resulted in proportions of academics with teaching qualifications of 5.7% for a research intensive university, 10.6% for a university that is also a distance-education provider and 25.9% for a new university with recent history as an institute of technology. These percentages match the low levels of participation indicated in the literature. Appendix A provides the details of this investigation.

One reason for the low level of participation in academic development programmes can be assigned to the lack of external rewards. Academics confirm that their institutions offer development opportunities, yet say that there is little encouragement to take up these opportunities (Crawford, 2010). There are differences within institutions with regard to supporting participation, with some departments facilitating uptake with measures like time relief (Hanbury et al., 2008). Academics experience intrinsic rewards from teaching but in general do not see that they get extrinsic rewards through recognition and career advancement (Ginns et al., 2010). Teaching related rewards, such as fellowships or awards, have been introduced, but still do not carry the same professional recognition as research success (Robson, 2006). The understanding among academics that career progression is research dependent lowers the motivation to take part in academic development programmes about teaching (Hanbury et al., 2008).

Intrinsic motivation to further one's development as a teacher is described as a desire to learn and grow. It is facilitated by positive feedback from students and observation of benefits for students (Stenfors-Hayes, Weurlander, Dahlgren, & Hult, 2010). Barriers for striving for development as a teacher lie in the lack of incentives and support from management. Barriers are also seen in the lack of interaction, intellectual discussion and sharing with colleagues (Stenfors-Hayes et al., 2010).

It is difficult to evaluate the effect of academic development work (Bamber, 2008; Cilliers & Herman, 2010; Gray & Radloff, 2008). Measures like student satisfaction, attrition rates, progression, retention or grade point averages are used to estimate the improvement in student learning or the higher education system in more general terms. Yet, these measures can only indirectly give an indication of the impact of academic development (Gray & Radloff, 2008). Influenced by the difficulties of determining effects on student learning directly, researchers are looking for changes in approaches by academics in response to participation in academic development approaches. A move from teacher-led to learner-focused approaches is seen as a positive outcome, as research is available demonstrating the resulting benefits to student learning (Kember, 2009; Ginns et al., 2008; Hanbury et al., 2008; Light, Calkins, Luna, & Drane, 2008; Weurlander & Stenfors-Hayes, 2008). Programmes also increase the awareness of academics on learning processes (Weurlander & Stenfors-Hayes, 2008).

Looking beyond the individual academics participating in academic development programmes, a positive impact was noticed for their departments. Academics had gained a new language that enabled them to talk about teaching and learning in more fundamental ways than before (Hanbury et al., 2008). New cultures facilitating exchange on teaching and learning developed (Ginns et al., 2010). Course participants were able to influence the practice of colleagues, the level of discussion increased, and the advice of participants was sought by others (Cilliers & Herman, 2010).

One of the most critical success factors for academic development is a supportive departmental and academic environment (Ginns, Prosser, et al., 2007; Lucas, 2000; Morris & Fry, 2006; Sharma & McShane, 2008). The ability of an individual to implement changes is dependent on the agreement of others (Weurlander & Stenfors-Hayes, 2008). If a larger number of academics within a department has taken part in a programme, it is easier for the individual to transfer new insights

into practice (Hanbury et al., 2008). Individuals need backing for implementing innovative methods in teaching and assessment (Ginns et al., 2008). A supportive environment, provided by a culture of sharing and community spirit, is of specific importance to new academics (M. King, Loddington, Manuel, & Oppenheim, 2008).

It is challenging to implement a new approach to teaching, even if value and methods are well understood. A team setting and sharing of experiences with others during the teaching processes are helpful (Clegg et al., 2006). Collegial networks are important for reinforcing what has been learned in academic development programmes (Ginns et al., 2008) and provide spaces for discussion and sharing of good practice (Crawford, 2010).

A non-supportive departmental context, a lack of knowledge by colleagues or resistance to change can prevent implementation of newly obtained knowledge and skills (Bamber, 2008; Stenfors-Hayes et al., 2010). While reflection and critical thinking in regard to one's own teaching is positive, a lack of engagement with conceptions and ideas of others limits academics to the boundaries of their own practice (Robson, 2006). Personal circumstances, motivation and philosophy of academics play an important role (Crawford, 2010). Participants of academic development programmes, who had been forced by their heads of department to attend, gained less from the programmes than others who had volunteered (Cilliers & Herman, 2010). Unfortunately, today's higher education environments are lacking structures for supporting communication and sharing about teaching (M. King et al., 2008). The efforts extended by academic development programmes to foster learning communities are limited (Robson, 2006).

Besides the supportive collegial environment, academic leaders play an important role in affecting change via academic development programmes (Ginns et al., 2010; Hanbury et al., 2008). Participation in programmes is facilitated by support such as teaching release (Ginns et al., 2008). Stigmar (2008) emphasises the importance of shared collegial and managerial leadership. Academic development action programmes should not be imposed on academic units but need to acknowledge local contexts and practice, and should be driven by motivated collegial groups. In addition, action programmes need to be strengthened by managerial authority. Informal communication, for example between heads of departments and new academics, is helpful to academic development and should occur more often (Staniforth & Harland, 2006). Teaching grants can

provide the resources required to transfer new techniques acquired in development programmes into practice, while on the other hand, a lack of resources can prevent the implementation of new approaches (Ginns et al., 2010).

Criticism is voiced on how the impact of academic development programmes is measured. One aspect of this criticism relates back to the prevalence of managerialism in higher education. The pressures of accountability with the need to show a return on investment in academic development programmes are criticised as being unhelpful, especially as impact of academic development is not well defined (Gray & Radloff, 2008). Trevitt and Perera (2009) call for dropping performance and accountability requirements in favour of working together collaboratively to devise new approaches to meet emerging needs. Schuck, Gordon, and Buchanan (2008) ask for proposal of core values that are central to enhancing higher education. They suggest building on collegial reflection, consideration of ethical issues and support for risk-taking.

A second aspect of criticism relates to the time frames of the evaluations of effectiveness of academic development programmes. While these programmes can have a long-term effect, evaluations are often conducted soon after programme completion (Bamber, 2008; Cilliers & Herman, 2010). This short time-frame is not satisfactory as the programmes aim at changes in values and approaches that will unfold over time (Sword, 2008). Further, the degree to which learning from programmes can be transferred into practice is dependent on the departmental context of a participant (Bamber, 2008). How much a participant has benefited from a programme is, therefore, not necessarily immediately visible in their teaching.

This review of academic development approaches has touched on the importance of the community around academics developing their teaching. The individual needs the support of the community to take advantage of their new knowledge. In turn, the community can benefit from the improvements made by the individual. The next section looks at characteristics of community-based approaches implemented in higher education.

2.3.3 Community-Based Approaches

As emphasised in the review of academic development approaches, community contexts play an important role for affecting improvements in teaching and learning. This section looks at how academic development approaches based on a

community aspect are structured, what kind of learning or development is targeted and what impact arises for individuals and communities. Table 2.1 briefly introduces the community-based studies that have been analysed for this section.

Community-based approaches to academic development can be characterised by their focus. Some of these approaches build on existing groups and aim at improvements across these groups. Other approaches invite individuals to form new groups, with the aim of providing these individuals with a supportive context. An element of the approaches usually is to develop a group into a community. In the study reported by Bolander Laksov, Mann, and Dahlgren (2008) the target was to improve teaching quality across an existing group formed by a department with strong research focus. In terms of teaching, the department could have been described as a collection of individuals, with very limited communication about teaching. One aim of the intervention was to transform the department into a teaching community. The study described by MacKenzie et al. (2010) had a different focus. In this study, individuals were invited to form a new group. These individuals came together driven by the shared requirement of having to engage in SoTL. While there was also the aim to transform the group into a community, the primary target was to assist the individuals in their SoTL projects. Carr, Deacon, Cox, and Morrison (2008) report on a project attempting to provide individuals with the support of a community to assist with learning about the use of technology for teaching. While focusing on the advancement of individual knowledge, a welcome side-effect of the project was that the knowledge of colleagues outside the community was advanced.

Some of the community-based approaches target generic improvements around teaching or the situation of individual academics. The study introduced by Bolander Laksov et al. (2008) aims at improving the teaching quality in a department in general without focusing on a specific area. The mentoring circles discussed by Darwin and Palmer (2009) provide assistance to new academics, give social support and help with finding information. No specific issues or topics are predetermined when setting up the circles. The approaches presented by Byrne, Brown, and Challen (2010) and Bell and Mladenovic (2008) are more targeted in their focus. These approaches are based on teaching observations with subsequent feedback and discussions. Other community-based approaches focus on quite specific aspects. The projects presented by MacKenzie et al. (2010) and Waterman et al. (2010) focus specifically on supporting academics in carrying

Table 2.1: Studies underlying the review of community-based approaches to academic development

Reference	**Topic of study**
Bolander Laksov, Mann, and Dahlgren (2008)	Creating a CoP to improve teaching in a large, research-intensive department
Carr, Deacon, Cox, and Morrison (2008)	Fostering an emerging CoP with the focus on using technology in teaching
Anderson (2008)	Investigating the membership of part-time lecturers in a departmental CoP
MacKenzie et al. (2010)	Building a faculty learning community to support engagement with SoTL
Waterman et al. (2010)	Forming faculty learning communities to support action research SoTL projects
Nugent et al. (2008)	Using faculty learning communities to support integration of technology into teaching
Schlitz et al. (2009)	Using faculty learning communities to support the introduction of new technology for assessment
Darwin and Palmer (2009)	Building mentoring circles to provide assistance and support to academics
Byrne, Brown, and Challen (2010)	Extending peer observations to become peer development
Bell and Mladenovic (2008)	Conducting peer observation exercises for tutor development

out SoTL projects. The projects described by Nugent et al. (2008) and Schlitz et al. (2009) target the integration of technology into teaching.

Where new groups or communities are formed, criteria have to exist by which to invite members. In general, there is a call for volunteers or applications. In some projects, selection into the group is dependent on belonging to a specific category such as part-time lecturers (Anderson, 2008), teaching only 'university teachers' (MacKenzie et al., 2010) or tutors (Bell & Mladenovic, 2008). In some projects, attention is paid to which structures in the university potential members belong to. Schlitz et al. (2009) describe that the participants in their project represented different academic programmes. In contrast, the mentoring circles described by Darwin and Palmer (2009) formed groups from members of the same faculties. The group targeted in the study by Bolander Laksov et al. (2008) was based on an existing department, yet participation was voluntarily. All studies investigated in this section relied on voluntary participation.

The initiatives for all the studies investigated came from an academic development unit or similar grouping. Approaches like the mentoring circles (Darwin & Palmer, 2009) or the fellows programme (Waterman et al., 2010) are regular programmes with yearly intakes. Such programmes involve participants in specific activities for durations of one or two years. Beyond this time it is hoped that the participants can sustain the positive effects of the programmes by themselves. Other programmes, such as the assessment improvement project described by Schlitz et al. (2009), seem to have been one-off initiatives targeting specific areas. Projects, as the ones described by Bolander Laksov et al. (2008) and Carr et al. (2008), aim for lasting changes in interaction and collaboration of group members. If successful, groups will have transformed into communities, characterised by common interests in teaching and learning about teaching.

The programmes discussed are structured in a variety of ways. The mentoring circles approach described by Darwin and Palmer (2009) focuses on creating opportunities for groups to get together in regular intervals. The group members share experiences and work together to find solutions to problems experienced by individuals. While administrative support is provided, the groups develop their own agendas for their meetings. The peer development approach suggested by Byrne et al. (2010) works in a similar way. Groups are formed who proceed to define their own topics and tasks around teaching observations and development. Other programmes, such as the fellows programme described by Waterman et

al. (2010), provide a more elaborate structure. Application to the programme is made via a proposal that describes the individual project of an applicant and addresses at least two of the learning objectives targeted by the university. Rationale and clarity of the project ideas are assessed. Deadlines are set for accepted projects, progress is presented at seminars and findings at conferences. While the structures of the programme are set, participants are in control of their project content. The initiative for teaching-only academics described by MacKenzie et al. (2010) started out with an initial group retreat that was followed up with monthly meetings. Again, the group members worked on individual projects in self-determined ways.

In many approaches, see MacKenzie et al. (2010), Bolander Laksov et al. (2008) or Nugent et al. (2008), support and guidance are provided by academic developers, who facilitate programme structures, provide resources and make theories accessible. In some programmes, see Bell and Mladenovic (2008), Waterman et al. (2010) or Nugent et al. (2008), participants receive a small sum of money to assist with additional time requirements, project implementation or to attend a conference. In approaches like the mentoring circles or the peer observations, the support for the individual comes from the group members. The design of all approaches focuses on creating structures or contexts that allow individuals or groups to help themselves, by gaining access to resources and information, having opportunities for meaningful exchange and receiving constructive feedback.

Strong positive impact for the participating academics is reported. A new sense of collegiality and community, with the effects of feeling safe and valued and counteracting isolation is reported by several authors (Byrne et al., 2010; Darwin & Palmer, 2009; MacKenzie et al., 2010; Schlitz et al., 2009; Waterman et al., 2010). Participants felt personal affirmation and validation (Waterman et al., 2010). Friendships and partnerships with colleagues across the university were developed (Waterman et al., 2010) and networking opportunities provided a chance for exchange (Schlitz et al., 2009). The involvement allowed participants to gain new skills (MacKenzie et al., 2010). Learning and reflection were positively impacted (Byrne et al., 2010). Thinking was stimulated and knowledge extended towards different approaches to teaching across disciplines (Waterman et al., 2010). A new-found common language helped communication among academics (Bolander Laksov et al., 2008). The fellowship programme reported on

by Waterman et al. (2010) also led to promotions and publications for some participants. While no negative impact was reported by any of the authors, it was cautioned that the time required for participation can cause a problem (Byrne et al., 2010; MacKenzie et al., 2010). In relation to total staff numbers the proportion of individuals involved was fairly small across all studies. Only a minority of staff were involved (Byrne et al., 2010). While there clearly were positive outcomes for the participants, the impact on the university as a whole was limited (Nugent et al., 2008).

A variety of critical success factors for community-based approaches are outlined in the studies. Bolander Laksov et al. (2008) write that the initiative for a programme has to come from within the department and should not be imposed top-down from management. A vision has to be developed and driven from within the group. Ownership and engagement has to lie with the group. While participation should be voluntary, individuals must make a commitment to the initiative (Darwin & Palmer, 2009). Waterman et al. (2010) sees the project-oriented nature of the fellowship programme as reason for its success. Darwin and Palmer (2009) emphasise the importance of establishing confidentiality and trust. For Bolander Laksov et al. (2008) creating a dialogue on teaching and learning is important. This is helped by regarding teaching and learning as an intellectual problem, providing academics with an opening for engagement. The role of academic developers lies in facilitation and support, without dominating or leading change (Bolander Laksov et al., 2008; Darwin & Palmer, 2009). The role of institutional management is to support and motivate participation (Byrne et al., 2010; Bolander Laksov et al., 2008). MacKenzie et al. (2010) state the importance of bringing individuals from different professional backgrounds and subject areas together, providing for a range and depth of experiences and helping to build a safe space by minimising competition. Byrne et al. (2010) point out the importance of integrating new members into a group to prevent staleness. In the project reported on by Schlitz et al. (2009), the diversity of the group in terms of disciplines and seniority enriched the experience of the participants. Longterm commitment is required to sustain benefits (Carr et al., 2008) and the changes achieved must become embedded into the culture of the organisation (Byrne et al., 2010).

As this review of studies of community-based approaches to academic development of teaching has demonstrated, there are strong indications for the

success of such approaches. The majority of studies investigated were based on Communities of Practise (CoP) or faculty learning communities. The theories underpinning these two approaches are examined in Section 2.4. The mentoring circles or peer observation approaches will not be followed up specifically. While having the potential for positive impact, they are narrower in their focus than the other approaches. For the purposes of this research, a wider view on teaching and interaction among colleagues is desired.

2.3.4 Further Suggestions

In the previous sections, research-teaching linkages, academic development and community-based approaches have been reviewed. This section adds further suggestions aimed at improving the situation of teaching in higher education. Researchers are calling for changes to leadership and quality control in higher education. Leadership needs to be improved and present at every level (Cashmore & Ramsden, 2009). New importance needs to be put on leadership and management roles for teaching and learning with the aim of affecting cultural changes that will ultimately impact on the current structures in higher education institutions (S. J. Marshall, Orrell, Cameron, Bosanquet, & Thomas, 2011). Commitment of heads of departments is essential for developing a cooperative and collegial culture, where teaching is valued and teaching practice evolves (S. J. Marshall et al., 2011). Without the strong support of institution, department and programme leaders, academic development approaches will not reach their full potential (Knight et al., 2006). Department chairs are seen as crucial for affecting change (Senge, 2000). Yet, leadership in academic departments needs to go beyond chairs and should become a collective responsibility (Spiller, 2010). Chairs have to work with others to establish directions. They need to lessen constraints and model the change they are seeking to create (Senge, 2000).

External quality control mechanisms are seen as ineffective and bureaucratic and without positive impact on teaching practice (Ming, 2010). Suggestions are made that quality assurance mechanisms at a local level would be more beneficial for improving teaching quality (Ming, 2010). The evaluation of quality should be embedded into daily life and become a collective as well as an individual responsibility (Cashmore & Ramsden, 2009). Teaching excellence should be reconceptionalised. Excellence should be characterised by intellectual curiosity,

a genuine dialog about teaching and open debate in a vibrant culture (A. M. Skelton, 2009).

The future relationship of research and teaching should overcome the current separations and bring both areas closer together (A. M. Skelton, 2009). To overcome the separations there are suggestions to focus on learning instead on research and teaching (Schapper & Mayson, 2010) and to regard learning as a process instead of focusing on outcomes (Boshier & Yan, 2008). Brew (2010b) suggests to take a more holistic viewpoint with a focus on scholarship of academic practice. Such viewpoint encompasses research and teaching and the application of research and inquiry to all areas of academic life. A closer alignment of research and teaching interests could be facilitated by allowing academics more flexibility in setting the content of their teaching based on their research, counteracting the increasing demand for formalism and pre-defined teaching objectives (Karagiannis, 2009). Research and teaching responsibilities should be assigned more flexibly with equal rewards given for excellence in each of the areas (Karagiannis, 2009). Cashmore and Ramsden (2009) ask for acknowledgement of excellence in teaching with rewards such as promotion and tenure, the same as they are given for research excellence, instead of giving specialised awards for teaching that ultimately carry less value. Promotion based only on research with weak teaching should not be supported (Mortensson, Roxa, & Olsson, 2011). Involvement in SoTL is seen as conducive towards continuous improvement in teaching and learning and the development of a quality culture (Mortensson et al., 2011). To promote SoTL as a viable research approach for academics, the distinction between subject-based and pedagogic research must be eliminated (Ginns et al., 2010; Macfarlane, 2011). The only factor that counts should be the quality of the research (Macfarlane, 2011).

Researchers address the question of how academic development should proceed. There is some call for making it compulsory to obtain a qualification in university teaching before receiving tenure (Cashmore & Ramsden, 2009). Others emphasise the need to counteract today's individualistic and competitive academic environments (Boshier & Yan, 2008). Academic development needs to encourage the scholarship of academic practice, challenge and question practice and assumptions (Brew, 2010b). A shift in attitude is suggested, away from a deficit model that says training is required because of poor performance, towards seeing development as part of ongoing professional practice (MacDonald, 2001).

The sector should look for academic development opportunities that are reflective and integrated into the teaching practice and contexts of academics (S. J. Marshall et al., 2011). Knight et al. (2006) also emphasise integration into professional practice and value event-based academic development, to bring in new ideas and to unlock implicit knowledge. S. J. Marshall et al. (2011) and Knight et al. (2006) advocate an approach to academic development that brings the academic development to departments, working with departments within their working and teaching contexts, and such reaching out to all members of the department. Such development approach compares favourably to centralised academic development that can only address those academics who volunteer to participate. Department-related initiatives provide the opportunity to affect the development of everyone's educational practice (Knight et al., 2006). Angelo (2000) supports the view that departments are the most promising units for academic development efforts. Departments should be transformed into 'productive, scholarly learning communities' (p.76). Departmental chairs are seen as the natural leaders in transforming departmental cultures.

2.3.5 Conclusions on Addressing the Situation of Teaching

Following on from a summary of the literature on recommendations to address the lack of focus on teaching in higher education, this section draws initial conclusions with regard to the teaching groups as constructs for guiding learning about teaching. Universities are part of complex political, economic and social settings. Widened participation and increased student numbers (Hardy, 2010), limited resources (Lomas, 2006), internationalisation (Brew, 2010b), heightened public scrutiny (Bradmore & Smyrnios, 2009) and new information technologies (Kenny, 2009) put considerable demands on higher education. There is a widely-held view that demands of accountability have changed the climate in universities. Competition and individualism have replaced shared adventure and collegialism (Meyer, 2007; Archer, 2008). While both research and teaching are under pressure, the effects are most strongly felt in teaching.

Addressing such complex situation will naturally require a complex set of measures if change is to be affected. Such measures need to include a new view of leadership and management, on institutional, faculty and departmental levels. The recognition of excellence in teaching and in research into teaching needs to be improved so that academics can see the value in pursuing these fields with

increased vigour. Workload issues need to be addressed, enabling academics to strive for excellence in subject-specific research, in research into pedagogy and in teaching. Collegiality needs to be nurtured through leadership on all levels to provide academic environments that facilitate open and supportive exchange. Pursuing such comprehensive measures goes well beyond the scope of this thesis.

Important forms of academic development approaches in support of learning about teaching are academic development programmes and community-based approaches. Academic development programmes can lead to teaching qualifications. To a certain degree, research shows that such programmes have positive outcomes. This is largely measured in changes of approaches to teaching from teacher-centred to learner-centred (Angelo, 2000). The hesitation in attesting positive outcomes stems from the relatively low participation rates that not only mean that the majority of academic miss out on learning directly from the courses, but also that transfer into practice is negatively affected (Ginns et al., 2008). Academics, who work in departmental environments with low participation rates and potentially low levels of familiarity with teaching principles and language of pedagogy, find it difficult to transfer their new knowledge and skills into practice, as they are lacking support, understanding and encouragement from their colleagues (Bamber, 2008). Research could be undertaken to increase participation in academic development programmes, yet this is not the direction pursued by this research.

The community-based approaches to academic development reviewed in the literature are linked to highly positive outcomes for their participants. Communities of academics are formed and provide academics with the collegial support networks often missing in today's higher education institutions. The communities provide space for both academic and personal dialogue, enabling individual and shared learning in supportive and trusting environments. Success factors for the community-based approaches seem to lie in the right mixture between guidance and flexibility, in providing strong facilitation while building on self-determination of the groups. The communities can either have a shared focus, or individuals can follow their own projects for which they receive support from the group. Individuals should participate on a voluntary basis and should be fully committed to the programme set out for their communities.

Based on the success of the community-based approaches to academic development and their relative closeness to the teaching group approach proposed in this

thesis, the next section of this literature review focuses on better understanding the principles of community-based approaches.

2.4 Theoretical Basis for Teaching Groups

The purpose of this section is to identify a theoretical basis for teaching groups. This is done by looking at the theories of learning underpinning community-based approaches and the two major community-based approaches, Communities of Practice (CoP) and faculty learning communities, that have formed most of the examples examined in Section 2.3.3.

2.4.1 Theories of Learning Underpinning Community-Based Approaches

One way of approaching theories of learning is to consider the three metaphors of learning that have been proposed. The two original metaphors, the acquisition metaphor and the participation metaphor, go back to the writing of Sfard (1998). Paavola, Lipponen, and Hakkarainen (2004) have suggested a third metaphor, the knowledge-creation metaphor. The acquisition metaphor focuses on the learning of the individual within their own mind and is therefore not further considered in the context of this research that looks at community-based approaches. The participation metaphor emphasises how learning and the construction of knowledge depend on, are influenced by, and are result of shared learning activities of individuals and their environments (Paavola et al., 2004). The knowledge-creation metaphor focuses on the collaborative creation of new knowledge in support of innovation (Paavola et al., 2004). Paavola et al. (2004) derive this metaphor from the examination of the models of innovative knowledge communities presented by Nonaka and Takeuchi, Engestroem and Bereiter, that, despite their differences, are seen to focus on common aspects of collaborative knowledge advancement. Both the participation and knowledge-creation metaphors provide valuable foundations for this research.

Other authors, who write on theories of learning, focus on social aspects of learning in distinction to earlier theories like classical theories or behaviorism, that have regarded learning as an individual phenomenon (Phillips & Soltis, 2004). While learning is a personal process, it occurs in a social setting (Jordan, Carlile,

& Stack, 2008) and has a social dimension (Jarvis, Holford, & Griffin, 2003). Learning is a cognitive activity that is influenced by social factors (Jordan et al., 2008). The individual's social, historical and cultural contexts determine how and what they learn (Jarvis et al., 2003). Prominent researchers in the field of learning theories, such as Dewey, Vygotsky and Bandura, have emphasised the importance of the interplay between the individual and their social context (Phillips & Soltis, 2004).

In the literature, learning theories have been grouped from a number of different directions. For example, the work by Vygotsky is labelled as constructivist by Schunk (2012), as cognitivist by Jarvis et al. (2003) and is introduced under the heading of 'social aspects of learning' by Phillips and Soltis (2004). Paavola et al. (2004) create links to Vygotsky's work both from the participation and knowledge-creation perspectives.

Despite different angles of analysis it is evident that there is a substantial body of literature that supports the following:

- Learning cannot be separated from the social context in which it occurs;
- Knowledge construction and knowledge creation result from interactions and collaborations of individuals with their environments.

The teaching groups, proposed for this research and the community-based approaches discussed in this section, firmly place the individual academic within an environment or social context of colleagues. Interactions and collaborations already occur in these environments or are to be facilitated. Theories based on social aspects of learning as well as the metaphors of participation and knowledge-creation therefore provide a suitable foundation for this research. Following on from this observation, the remaining paragraphs of this section review literature that specifically relates to adult learners and might provide helpful directions for the research.

Illeris (2007) discusses learning in context of the changes occurring during the stages of life. Of the four main life ages described, the age of adulthood is the one relevant for this research. Illeris writes that it is characteristic for adults to be driven in their learning by what they want to learn and see as meaningful for their life goals. Adults are reluctant to learn something they do not perceive as having meaning to them or they have no interest in. Illeris describes an interesting paradox that occurs in adult education situations that entail teacher-student

relationships. Placed in the student role adults find it difficult to accept their lack of authority and become bored and resistant. Yet, at the same time, they are reluctant to take on responsibility for their own learning. Effective learning for adults will only occur if adults fully take charge of their learning and look at the teacher as supporting their learning process. Knowles, Holton, and Swanson (2011) add the observation that individual differences become more prominent with age, necessitating the flexibility in provision regarding 'style, time, place, and pace of learning' (p.39).

These observations are important for this research. For their learning about teaching to be successful, academics must be truly interested. Learning about teaching must be part of their academic life goals. Learning must be driven by academics themselves. Approaches that involve academic developers in a supporting role will be more effective than teacher-driven settings.

2.4.2 Concepts of Communities of Practice

The term Communities of Practice (CoP) goes back to work by Lave and Wenger (1991), who introduce a new theorisation of learning (Hughes, Jewson, & Unwin, 2007b). Individuals are seen as social beings and active social participation becomes central to learning. Criticisms are directed at the focus on an institutional context of education, the role of formal education and the reliance on the teacher as expert. It is suggested that learning takes place in many situations and is situated in practice. Learning is not necessarily associated with teaching and the importance of learning outside formal education is emphasised (Hughes et al., 2007b). A major contribution of Lave and Wenger is the creation of a new theory of learning that is embedded in social practice (Fuller, 2007).

The focus of Lave and Wenger's work from 1991 is on theorising learning and not on CoP (Fuller, 2007). Wenger (1998) extends the conceptualisation of CoP. Wenger builds on a social theory of learning that integrates the components of meaning, practice, community and identity. Learning is seen as experience, as doing, as belonging and as becoming. The background to the social theory of learning is 'legitimate peripheral participation' which is based on an apprenticeship model, allowing the inexperienced newcomer to participate, grow and integrate into a community. Wenger advocates a rethinking of learning, away from the focus on formal learning contexts exemplified by classrooms, textbooks and teachers. He encourages recognition that learning takes place in everyday

contexts, as the learner engages with and contributes to the practices of communities. He calls for forms of learning that encourage action, discussion, reflection and meaningful practices, all taking place in the context of a CoP. Wenger emphasises that the concept of a CoP is integral part of daily life. Everyone belongs to multiple CoP relating to various aspects of their lives. Membership in these communities is implicit and changes over time. Wenger sees his contributions as providing explicit focus for concepts that are inherently familiar. He wants to facilitate the examination and rethinking of these familiar concepts and to provide a systematic vocabulary to help formulate perceptions and to direct actions.

Moving his attention to workplace contexts, Wenger (1998) emphasises that even work that looks individual is carried out in a community context. There is always a context of practice with its rules, regulations, assumptions and views. The concept of practice emphasises the social context of work and the negotiations that take place in both explicit and tacit forms. Wenger describes CoP as places for both the acquisition and creation of knowledge. Newcomers gain access to the competence of a CoP by their personal experiences of engagement, facilitating the acquisition of knowledge. CoP provide opportunities for the creation of knowledge. Their mutual engagement, joint enterprise and shared competence give the context in which new experiences and ideas can be evaluated and transformed into new knowledge. Learning requires engagement and imagination and becomes effective if anchored into practice. Wenger sees learning as wider than the acquisition of skills and information. He refers to the process of becoming, to the contributions of new knowledge and experiences to forming an identity. The community facilitates this learning by providing a space for identity building.

According to Wenger (1998), CoP have always existed and predate the desire to explicitly design contexts for learning. Where CoP already exist, one can facilitate their further development, where new CoP are desired, one can provide favourable contexts and conditions. Yet, one cannot legislate a CoP into existence. Practices need to emerge in context of policies and rules of accountabilities, identities need to form around roles, allegiance to specified visions needs to develop, meaning and work practices need to evolve. CoP, and the learning associated with them, can be supported and facilitated, but not simply created. Central to this is the support of engagement, which encompasses both the support of activities and of community building.

CoP are related to but different from organisations (Wenger, McDermott, & Snyder, 2002). CoP arise from practice and negotiate their own enterprise. They can be closely aligned to organisational structures, events or requirements, but this is not necessarily the case. Wenger and colleagues write that CoP will develop independently from recognition through organisations. They see the voluntary engagement of members and the emergence of internal leadership as key factors for the strength of CoP. Of further importance are informality and autonomy. Despite the emphasis on independence, organisations still have a role in active and systematic cultivation of CoP. Organisations can create environments supportive of CoP by valuing learning, providing resources, facilitating participation and removing obstacles. Organisations can facilitate CoP by welcoming their knowledge into the organisation (Wenger et al., 2002).

CoP exist in a variety of forms (Wenger et al., 2002). Their sizes can range from a few members to hundreds or even thousands. CoP can have a life span of just a few years or be centuries old. CoP bring both short- and long-term benefits to community members and organisations. For members being at work is experienced more positively and professional development is fostered. The organisation sees improved business outcomes and develops organisational capabilities. In addition to tangible benefits, CoP provide intangible benefits such as improved relationships, an increased sense of belonging, and improved professional confidence and identity. CoP add value when they connect the enterprise of the community with the strategy of an organisation. This is required so members see value in investing themselves in the community, and for the organisation to justify facilitation of the community. In contrast to organisational units with management structures and reporting lines, CoP are informal structures of peers, focusing on knowledge and targeting issues like competence and innovation. CoP accept different levels of participation by members. Some members will form the core of the community, some will be reasonably active, while others will only be involved on the periphery.

Since the original work by Lave and Wenger in 1991 the early concepts have been developed further by Wenger and by other researchers. CoP have become popular in many areas of business and also in academia. Despite recognition of the positive aspects of the concepts behind CoP, weaknesses and areas for further development have also been identified, for example by Fuller (2007), James

(2007) and Hughes, Jewson, and Unwin (2007a). CoP emphasise learning as participation. Participants acquire the viewpoints, the language and the processes of their community. Fuller asks how learning occurs in a CoP, how new knowledge is produced and how knowledge from outside the boundaries of a community is accessed and integrated. She goes on to question how the concepts of CoP, as developed by Wenger and colleagues, cope with the frequent changes caused by reorganisations or take-overs, characteristic for today's work places that require a more expansive learning than proposed in CoP. The suggestion is made that focusing on one community is too limiting. Individuals who have access to multiple social learning spaces have richer experiences. Also, learning should not be limited to the community setting, as formal education can make valuable contributions. Fuller challenges the novice versus expert concept as being presented too uniformly. She posits that multiple areas of expertise are required in today's learning environments and individuals might be novices in some areas but experts in others. Fuller emphasises the importance of looking at a whole system with its micro, meso and macro levels. This point is supported by Hughes et al. (2007a) who point to the layers of organisations that form complex contexts for CoP.

James (2007) provides an analysis of CoP in the context of higher education. With reference to the prevalence of managerialism and the decline of collegialism she states that the inward focus of CoP does not match the realities of academics in higher education today. Traditionally, academics see themselves defined via their disciplinary communities and knowledge. While this connection is still strong, new forces linked to seeing education as commodity, new accountability and competition for students and resources, change how academic see their identity. The separation of research and teaching means that academics have to belong to separate CoP. The pressures to account for outcomes and the competition between academics change the relationships within CoP. The trajectories of academics within and between communities can be complex and affect both individuals and communities.

2.4.3 Concepts of Learning Communities

The origins of learning communities go back to the work of John Dewey and Alexander Meiklejohn in the 1920s and 1930s (M. Cox, 2004; B. L. Smith et al., 2004). These researchers expressed concern about a negative impact on students from the separation of curriculum and faculty into departments and disciplines.

In response, it was proposed to form cohorts of students who together would take courses across the different disciplines, forming learning communities of students (M. Cox, 2004). Focus was put on student centred and active learning (B. L. Smith et al., 2004). From the 1990s the concepts of learning communities found their way into the professional development of teachers and academics at schools and universities, with the terms *professional learning communities* and *faculty learning communities* used respectively. The literature on professional learning communities, which analyses the generic principles in addition to specific implementations, is richer than the literature on faculty learning communities, which largely focuses on case studies. Also, as the term *faculty* implies, faculty learning communities are predominately situated in the United States. This section draws on literature from both school and university contexts, focusing on communities of educators as opposed to communities of students. The aim is to develop an understanding of the principles and characteristics of such communities to evaluate their suitability for the conceptual grounding of this research.

While there is no universal definition for the term *professional learning communities* (Stoll & Seashore Louis, 2007), key points are commonly agreed on. The core purpose of professional learning communities is to improve student learning (Stoll & Seashore Louis, 2007; DuFour, 2004; Mullen, 2009). The desire to facilitate student learning is always at the forefront and guides the mission of the community (Hord & Sommers, 2008). The aim of professional learning communities is to develop real communities that look beyond classroom boundaries and engage students, teachers and administrators in learning (Mullen, 2009). This requires valuing the input of all team members, developing a shared vision and working together towards student achievement (Mullen, 2009; Hargreaves, 2007). Staff on all levels and across all roles need to work together (Hord & Sommers, 2008) and both young and experienced teachers, as well as administrative staff, are encouraged to contribute (Mullen, 2009). Professional learning communities require an environment in which individuals feel confident in voicing their ideas and in which risk-taking is supported (Mullen, 2009). Members of a community need to feel comfortable in giving and receiving feedback (Hord & Sommers, 2008). Strong collaboration and democratic participation are expected (Hord & Sommers, 2008).

Professional learning communities need to draw on knowledge from beyond the boundaries of a group of teachers (Little & Horn, 2007). Exchange across

subject areas facilitates understanding beyond the boundaries of the own subject and allows for shared inquiry (McLaughlin & Talbert, 2007). Students should be included in collaborations and committees as their perceptions and insights can assist teachers in their reflections and learning (McLaughlin & Talbert, 2007). Professional learning communities are about developing social capital, about informal networks and relationships with other people (Mulford, 2007). In professional learning communities professional growth is valued. It is seen as enriching the teaching career and bringing intrinsic professional rewards, which is in contrast to traditional school communities were professional growth is intrinsically linked with moving up in the organisational hierarchy (Lieberman & Miller, 2008).

Professional learning communities target improvements in learning. Evidence based inquiry is carried out to find connections between practices and student learning (McLaughlin & Talbert, 2007). This requires drawing on inside and outside evidence, on the immediate teaching practice but also the wider learning context (Hargreaves, 2007). Professional learning communities build on the belief that the community has the capacity to develop best practices based on the knowledge inherent in the community (Lieberman & Miller, 2008). While this involves drawing on outside knowledge, it is different from a traditional professional development approach that relies on an outside expert to deliver knowledge. Teachers develop the capacity to analyse their practice supported by theory. They move from experience to theory, they conduct reflective practice (Lieberman, 2007). Pedagogical reasoning becomes transparent (Little & Horn, 2007).

Collegial inquiry, reflection and sharing are critical for the success of professional learning communities (Hord & Sommers, 2008). A systematic process of working and reflecting together to promote deep learning within teams is required (DuFour, 2004). Professional inquiry, inclusive of drawing on research, is welcomed (Mullen, 2009). The review of each other's practice, for example through peer observations and feedback, should be the norm (Hord & Sommers, 2008). Teachers need to overcome their isolation and work together to share data (DuFour, 2004). Groups needs to pool insights and ideas of the whole team (DuFour, 2004).

The creation of professional learning communities is extremely challenging (Stoll & Seashore Louis, 2007). Mulford (2007) suggests to start by developing a social community that values and enables collaboration, communication and

trust. From there a professional community can be targeted and a shared mission developed. Intellectual stimulation, initiatives and risk-taking follow from there. Mulford emphasises that is is not possible to skip a step in the process. Creating a strong professional learning communities can take years (Kruse & Seashore, 2007). Top down initiatives can be successful, but it is important to recognise and nurture the needs and contributions of individuals and local groups (Mulford, 2007). Professional learning communities bring together people who struggle with the same problems and frustrations (Lieberman, 2007). Facilitated by supportive conditions, relationships and trust need to develop (Lieberman, 2007). Talking about problems that arise in teaching practice needs to be encouraged. It is important to analyse the specific problems but also to look at the wider picture to find general lessons (Little & Horn, 2007). Learning about each other's practice forms a good starting point for shared research and knowledge generation (Lieberman, 2007). Developing a common language facilitates constructive exchange (McLaughlin & Talbert, 2007). Such exchange needs to focus on teaching practice and not on administrative issues (Little & Horn, 2007). The creation of professional learning communities in secondary schools can be more challenging than in middle or primary schools because subject knowledge takes priority over knowledge in pedagogy (McLaughlin & Talbert, 2007; Stoll & Seashore Louis, 2007).

Sustaining a professional learning community is challenging (Stoll & Seashore Louis, 2007). Hargreaves (2007) suggests building a strong culture that acknowledges the contributions of all members and does not overly rely on individual leaders. Building on past experiences and trying to uncover reasons for resistance to change is seen as important. In the recruitment of new teachers care should be taken to select individuals who are willing to collaborate, share and reflect and value collective responsibility (McLaughlin & Talbert, 2007).

The principles of professional learning communities are also applicable to higher education (Mullen, 2009). In the context of higher education the term *faculty* learning communities is used. M. Cox (2004) describes the goals of faculty learning communities. These communities aim to build a university-wide community through teaching and learning and to increase interest in teaching and learning. Diversity and enhancements in teaching and learning as well as evaluation and assessment are to be investigated and incorporated. The scholarship of teaching is to be facilitated. Building a faculty learning community

aims at increasing collaboration and understanding across disciplines and highlighting the need for general education. Excellent teaching is to be rewarded and recognised. Among the qualities Cox names as necessary for faculty learning communities are trust, openness, respect, collaboration, relevance, enjoyment and empowerment. Cox speaks strongly of a positive impact of faculty learning communities on teaching and learning in higher education and expresses the hope that more programmes to establish such communities will help universities to become learning organisations.

A comparison of professional learning communities in schools, and faculty learning communities in higher education, shows both commonalities and differences. The communities in both areas build on collegiality as a basis for coming together to share, explore, and develop new practise and create new understandings. Trust is an essential element of both types of communities, as is valuing the input of all members of the community, regardless of rank or position.

Key differences can be found in the scope of the communities (see studies by Nugent et al. (2008) and Schlitz et al. (2009) discussed in Section 2.3.3). Professional learning communities encompass a whole school. They are long-term and target a fundamental change across the whole school community. Faculty learning communities established in practice are far more limited in their scope. The communities are fairly small and designed for a limited duration of often one year. While the individual participants might experience fundamental change, the limited scope of the faculty learning communities means limited impact on the universities overall. Change on university level might be welcome but is largely not achieved. The descriptions for both types of communities emphasise the importance of support through institutional leaders, administration and resources. For faculty learning communities, the role of academic developers in providing support on pedagogy is outlined. That academic developers, or individuals with equivalent roles, are not mentioned in context of professional learning communities is not surprising, as teachers in schools, in contrast to academics, are well-grounded in pedagogy.

2.4.4 Foundations for Teaching Groups

In the previous sections, CoP, professional learning communities and faculty learning communities were reviewed. Section 2.3.3 presented studies based on CoP and faculty learning communities. This section draws on this material to

examine how the proposed concept of teaching groups relates to existing approaches. This is done by looking at the criteria of purpose, formation, time frame, membership, relationship to an organisation, view on members, degree of engagement and source of knowledge. Table 2.2 summarises these considerations.

The purpose of CoP lies in the acquisition and creation of knowledge (Wenger, 1998). Professional learning communities aim at improvements of student learning (Stoll & Seashore Louis, 2007; DuFour, 2004; Mullen, 2009). Faculty learning communities ultimately also want to assist student learning, but put improvements in teaching more in the foreground (M. Cox, 2004). The purpose of teaching groups, as proposed in this research, is compatible with all three approaches discussed. Improvements of student learning will be facilitated by improvements in teaching. In a higher education context, the acquisition and creation of knowledge can be applied to teaching and pedagogy, and as such, is fully compatible with the aims of teaching groups. A particular aim of this research is to achieve high levels of engagement with teaching by a majority of academics. This aim is close to what professional learning communities try to accomplish, but is different from CoP and faculty learning communities.

The aim of involving a majority of academics is a determining factor in the formation of teaching groups. The suggestion, to be tested in the course of this research, is that teaching groups already exist, based on organisational structures and teaching obligations. Should the existence of teaching groups be confirmed, the nature of interaction in these groups needs to be explored to establish if these groups can be called communities. This approach distinguishes the formation of teaching groups sharply from that of CoP and learning communities. Both CoP and professional learning communities evolve over time and cannot be created at will (Wenger, 1998; Kruse & Seashore, 2007; Mulford, 2007). Faculty learning communities are created in response to calls for participation, as the studies by Nugent et al. (2008) and Schlitz et al. (2009) show. Yet, there is fundamental difference between faculty learning communities and the approaches of professional learning communities and CoP. Faculty learning communities only create fairly small communities that neither contain a whole institution nor a profession or entity of similar scope. The idea of teaching groups is to encompass a large majority of academics at an institution and as such have a much larger impact than faculty learning communities.

Table 2.2: Comparison between CoP, learning communities and teaching groups

Criteria	**Communities of Practice**	**Professional learning communities**	**Faculty learning communities**	**Teaching groups**
Purpose	Acquisition and creation of knowledge	Improvement of student learning	Improvements in teaching and learning	High levels of engagement with teaching by majority of academics
Formation	Evolve over time	Evolve over time	Formed in response to call for participation	Teaching groups (not communities) exist already
Time frame	Long-term, many years	Long-term, many years	Typically for a year	Groups exist over many years
Membership	Voluntary, linked to identity	Aim to include the whole (school) community	Voluntary, in response to calls for participation	By default
Relationship to organisation	Independent of an organisation (but can be aligned)	Closely linked to an organisation (school)	Members are from across an organisation (university)	Based on the structures implemented by an organisation (university)
View on members	Newcomers and experts	Equals	Equals	Equals
Degree of engagement	Any level from leadership to staying on periphery	Strong collaboration of all members	Similar level of engagement of all at level agreed on outset	Significant engagement of all negotiated by group
Source of knowledge	Largely from members	Largely from members	From members with support of academic developer	From members with outside help as desired

CoP and professional learning communities typically exist for many years (Wenger et al., 2002; Kruse & Seashore, 2007). Being based on organisational structures that, in general, will remain stable over several years, teaching groups will also exist over these longer timeframes. This contrasts with faculty learning communities, as these are usually project-based and limited to a year (see the studies by Nugent et al. (2008) and Schlitz et al. (2009)).

Following on from their formation, the membership in teaching groups is established by default. This research proposes that any academic with teaching obligation belongs to one or several teaching groups. This again is a strong departure from the other approaches. In CoP, membership is voluntary (Wenger et al., 2002) and related to identity building of the individual (Wenger, 1998). Professional learning communities aim to include the whole school community (Mullen, 2009). There is no reference in the literature to enforced membership or membership by default. Faculty learning communities have voluntary membership. They gain their members from responses to calls for participation. When talking about *membership by default* for teaching groups, it needs to be kept in mind that the teaching groups, as they are proposed, focus on belonging to a *group*, not a community. The definition of teaching groups makes no assumption about the interactions or activities within these groups.

Teaching groups are, by definition, aligned to the structures implemented by an organisation. This also poses a difference to the other approaches discussed. A university will house many teaching groups. These groups are likely to have overlapping membership, and the assumption, to be tested, is that all academics with teaching responsibilities belong to one or several teaching groups. Faculty learning communities also have members from within one university and there are likely to be several such communities across a university. Yet, looking at the challenges for teaching in higher education discussed throughout this chapter and the voluntary participation, it is unlikely that all academics with teaching responsibilities will belong to faculty learning communities. Professional learning communities encompass whole school communities, and are therefore on a much larger scale than the teaching groups proposed, with, in many cases, one community instead of many teaching groups per institution. CoP are different again, as they can be related to an organisation but are clearly separate entities (Wenger et al., 2002). Figure 2.1 illustrates how professional learning communities, faculty learning communities and teaching groups relate to organisations.

The final three criteria to be discussed in this section, namely view on members, degree of engagement, and source of knowledge, extend beyond the definition of teaching groups presented at the outset of this thesis. What is shown here are potential characteristics for teaching groups, and with that closeness to or distance from the other approaches. Wenger (1998) talks about newcomers and experts in CoP. In contrast, the literature on professional and faculty learning communities emphasises the collegial nature among equals (Hord & Sommers, 2008; M. Cox, 2004). It seems that it would be suitable for teaching groups to look for collegial interactions among equals, similar to what is happening in learning communities. In terms of degree of engagement, teaching groups would also be similar to learning communities. The studies on faculty learning communities (see Nugent et al. (2008) and Schlitz et al. (2009)) indicate a similar level of engagement by all members at a level negotiated on outset, strongly influenced by the organisers of the call for participation that leads to community formation. For teaching groups, the level and type of engagement should be determined by the individual groups, taking specific group contexts and needs into consideration. Professional learning communities aim for a strong collaboration of all members, a goal that is compatible with what is aspired for teaching groups. In contrast, for CoP varying levels of involvement, from leadership to staying on the periphery, are emphasised (Wenger et al., 2002). With regard to sources of knowledge for

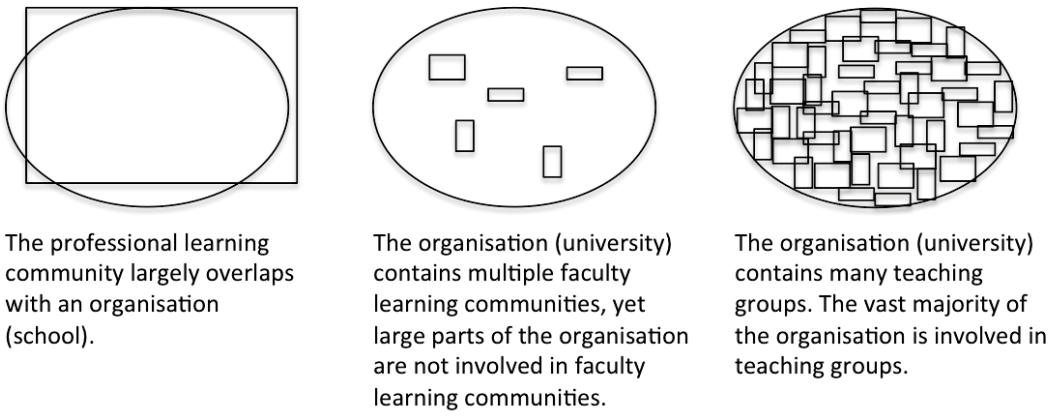

Figure 2.1: Relationships of professional learning communities, faculty learning communities and teaching groups to organisations

developments in teaching and learning, the idea for teaching groups is to accept input from academic developers, as this occurs in faculty learning communities, but also from other sources, such as formal or non-formal courses. This approach differs from the views taken in professional learning communities, which largely draw on the knowledge of their membership (Lieberman & Miller, 2008). CoP draw on a wide range of input, as the boundaries of the communities are not tightly defined (Wenger et al., 2002). Different from what is envisaged for teaching groups, the approach taken in CoPs is to largely draw on the knowledge of members. Membership in CoP might be fluctuating and might include individuals with links into areas not core to the CoP, but CoP do not explicitly draw on experts, such as academic developers.

In summary, it can be said that teaching groups, as they are proposed, are closer to learning communities than to CoP. Commonalities between teaching groups and, especially, faculty learning communities are in the goals of improving teaching and teaching, in targeting collegial engagement of equals, or in inviting academic developers in supporting roles. A pronounced difference from teaching groups to all other approaches lies in the formation of teaching groups based around existing structures implemented by an organisation and related to this, membership by default.

2.5 Conceptual Framework for this Research

The literature review presented in this chapter has provided an insight into the challenges facing higher education today. In particular, the situation of teaching as an area of academic responsibility under pressure has been demonstrated. It has been established that there is a need for improving the focus on teaching and the attention paid to academic development in teaching. Among the measures introduced in the sector, academic development approaches based on communities of academics have been shown as very beneficial. A closer examination of community-based approaches has suggested that learning communities form a partial basis for the conceptual framework for this thesis. The next section of this chapter develops the conceptual framework of this research by setting the proposed *teaching groups* in context with the wider concepts extracted from the literature. This is followed by presentation of the research objectives and questions.

2.5.1 Embedding Teaching Groups in the Literature

The literature reports on many successful academic development projects that are based on uniting academics in a community (Bell & Mladenovic, 2008; Bolander Laksov et al., 2008; Byrne et al., 2010; Carr et al., 2008; M. Cox, 2004; Darwin & Palmer, 2009; MacKenzie et al., 2010; Nugent et al., 2008; Schlitz et al., 2009; Waterman et al., 2010). These communities facilitate the engagement of the community members with teaching and learning about teaching. Targeted is engagement with pedagogy and practice of teaching and learning on a meaningful level, going beyond superficial conversations about teaching arrangements and administrative matters (DuFour, 2004; Little & Horn, 2007; MacKenzie et al., 2010; Waterman et al., 2010). The overarching objective for the communities is to improve student learning (DuFour, 2004; Hord & Sommers, 2008). This is achieved by working together on improving understanding of practice and theory of student learning and teaching and by creating new knowledge to be applied in practice (Lieberman, 2007; McLaughlin & Talbert, 2007). An important aspect of the community based approaches is the impact on the social well-being of the academics participating. Academics find colleagues with like-minded interests or anxieties (Lieberman, 2007; MacKenzie et al., 2010). The communities provide academics with a heightened sense of collegiality and with opportunities for meaningful engagement with others interested in teaching, which they often do not find in their research dominated environments. The research presented here wants to build on these features of community-based approaches.

The interactions within successful communities are characterised by trust and openness (Bell & Mladenovic, 2008; Byrne et al., 2010; M. Cox, 2004; Darwin & Palmer, 2009; Hord & Sommers, 2008; Mullen, 2009). A collegial atmosphere that values the input of all members and facilitates meaningful exchange is important (Schlitz et al., 2009; Waterman et al., 2010). The thinking behind this research agrees that such values are essential for a successful community. Part of the research process will therefore be to discover to which degree trust, openness and collegial atmosphere can be found in teaching groups.

Formation and sustainability of a community depend to a large degree on a supportive environment (Ginns et al., 2010; Hanbury et al., 2008; Hord & Sommers, 2008; Knight et al., 2006; S. J. Marshall et al., 2011). The value assigned to teaching and to excellence in teaching play a role, as does the provision of resources and the support provided by leadership. This research acknowledges

the importance of a supportive environment and will therefore attempt to find out how academics experience their environment.

The literature paints a fairly clear picture of the dominance of research over teaching in higher education (Carew et al., 2008; Cashmore & Ramsden, 2009; Chalmers, 2011; Ginns et al., 2010; Greenbank, 2006; Harris, 2005; Jauhiainen et al., 2009; Laksov et al., 2008; Lea & Callaghan, 2008; Light & R. Cox, 2001; B. L. Smith et al., 2004; Young, 2006). It shows that academics perceive that excellence in research is higher rewarded than excellence in teaching (Greenbank, 2006; Jauhiainen et al., 2009; Lea & Callaghan, 2008; Young, 2006). This gives rise to the questions about the motivation of academics to invest themselves into teaching, and learning about teaching, and to the value academics put on teaching excellence. This research attempts to find answers to these questions as motivation and value will be important factors in evaluating if teaching groups could form a mechanism for involving a majority of academics in learning about teaching.

The proposed definition of teaching groups is based on membership by default. The line of thought is that every academic with teaching obligation automatically belongs to one or more teaching groups, based on belonging to an organisational structure, or on teaching with others into a subject area or degree. This definition forms a significant departure from the formation of the communities presented in the literature that is based on voluntary participation. This departure is deliberate and designed to explore an approach that has the potential of including a majority of academics. This step is seen as necessary, as the literature confirms that the number of academics who participate in academic development with regard to teaching is fairly low, affecting not only the level of knowledge of individuals but also negatively impacting on the success of others in applying new knowledge (Bamber, 2008; Crawford, 2010; Ginns et al., 2008; Robson, 2006; Weurlander & Stenfors-Hayes, 2008). This research examines how academics relate to the definition of teaching groups, how many teaching groups they belong to and how these teaching groups are structured. Looking at these data, together with the findings on motivation and value around teaching, should make it possible to draw first conclusions on the feasibility of teaching groups as basis for learning about teaching. Using an organisational structure as basis for teaching groups aligns well with recommendations from the literature that suggest that

department-related initiatives are well suited to affect the educational practice of the whole group (Angelo, 2000; Knight et al., 2006).

The literature on community-based approaches emphasises the importance of integrating all individuals involved in teaching (Hargreaves, 2007; Hord & Sommers, 2008; McLaughlin & Talbert, 2007; Mullen, 2009). For the university sector this would mean to build communities including non-academic teaching staff and others in supporting roles. This research acknowledges that such an inclusive approach will ultimately be required for reaching the full potential of teaching groups. Yet, as a first step, this research focuses on academics. The justification for this approach is that academics are at the centre of teaching in higher education and that they are the group most challenged by divided responsibilities between teaching and research. The assumption is made that it is most important to find a mechanism to engage academics. Should this be successful, it should be possible to integrate others involved in teaching into the teaching groups. Ultimately, such inclusive view of teaching groups is most certainly aspired.

The literature on academic development goes beyond community-based approaches. Named are formal and non-formal programmes and informal opportunities (Knight et al., 2006; Robson, 2006; Viskovic, 2006). This research acknowledges that an overall solution to academic development around teaching will encompass a wide variety of approaches. For example, some members of a teaching group might attend seminars, explore the literature on a specific topic, or might even study towards a teaching qualification. With new insights brought back into the teaching group, all of these steps would have the potential to enrich understanding and knowledge within the group and would be beneficial. As outlined earlier, there is a wide range of opportunities for academics to engage in learning about teaching. The problem of higher education lies in a lack of uptake and not in a shortage of opportunities. The purpose of proposing teaching groups is to address the lack of uptake. There is no desire to limit the engagement of interested academics in any other academic development opportunities.

The term *teaching groups* has been chosen deliberately. It refers to a group of people, in this case academics, who are brought together by shared responsibilities in teaching. While the motivation for getting the groups together is *learning*, the organising principle for group formation is *teaching*. Emphasising this organising principle is important, as it allows addressing all academics with teaching

responsibilities, regardless of their involvement in shared learning with their colleagues or not. The term *group* is chosen in preference of the term *community*, as this seems to better reflect the reality in higher education today. The term community implies close collegial relationships dominated by deep and meaningful exchanges about teaching. One aspect of this research is to investigate what proportion of teaching groups could be called communities.

2.5.2 Research Objectives and Questions

The considerations outlined in the previous section lead to the objectives for this research. These objectives are:

- To explore if and in which ways academics see themselves belonging to teaching groups;
- To explore the potential of teaching groups to foster learning about teaching;
- To suggest recommendations wherein teaching groups could be used to further learning about teaching.

To address these objectives the following research questions are investigated:

1. Do academics belong to teaching groups?
   Can academics identify with teaching groups? What proportion of academics belong to teaching groups? How many teaching groups do academics belong to? How are the teaching groups characterised in terms of structures and teaching focus?
2. What happens in teaching groups?
   What interactions take place in teaching groups? To what degree are the academics belonging to the teaching groups engaged? What is the atmosphere in teaching groups? What experiences in teaching groups have fostered learning about teaching? What experiences in teaching groups have hindered learning about teaching?
3. How can teaching groups be characterised?
   What characterises teaching groups in terms of engagement with teaching? What are factors that determine the nature of a teaching group? How does the nature of a teaching group relate to the perceived quality of teaching?

4. What factors outside teaching groups influence engagement with teaching and learning about teaching?

   What contributes to engagement with teaching? What hinders engagement with teaching? What contributes to learning about teaching? What hinders learning about teaching? What experiences do academics have in interacting with others about teaching?

The following chapter introduces the theoretical underpinning of the thesis, as well as research methodology and methods.

Chapter 3

Theoretical Framework

The research presented in this thesis is based on constructionism and postpositivism. This chapter describes key characteristics of such theoretical underpinning and discusses the influence this has on the research. The decision to use a mixed methods research methodology is outlined and the methods selected for the research are described, both in terms of their generic characteristics and the specifics as applied in this research. The ethics considerations for the research are also discussed.

3.1 Theoretical Underpinning

The description of the theoretical underpinning of this research follows the structure suggested by Crotty (1998), building on epistemology, theoretical perspective, methodology and methods. Epistemology looks at 'how we know what we know' (Crotty, 1998, p. 8), it forms the theory of knowledge. The theoretical perspective provides the context for the research process. It outlines the assumptions brought into the research that affect how methodology is is understood and employed. Epistemology informs theoretical perspective, theoretical perspective informs methodology, which in turn informs the methods chosen for the research. In order to produce valid and valuable research, it is critically important to lay open research processes and theoretical foundations (Crotty, 1998). This is done in the following paragraphs and sections by discussing epistemology, theoretical perspective, methodologies and methods underlying this research.

The epistemological viewpoint behind this research is constructionism. In constructionism, elements of the social and natural world are combined in the

meaning constructed (Crotty, 1998). The meaning of knowledge arrived at is dependent on the social context, as this context moulds individuals and provides the environment in which the construction occurs. Individuals construct their world of meaning in relationship with others (Gergen, 2009). Kafai (2006) emphasises that personal and social dimensions contribute to knowledge. This influence of individuals and the social context has important consequences. A core tenet of constructionism is that meaning is not absolute, that different social groupings will construct different meanings. There is no absolute truth (Moses & Knutsen, 2007) and there is no single true or valid interpretation (Crotty, 1998). Such judgements would only be possible from a neutral, social context free perspective, which does not exist from a constructionist viewpoint.

Yet, as Crotty (1998) says, not all interpretations are of the same value. There are useful, liberating and rewarding interpretations and others of less interest. What is important, is to explain the context and how one arrives at understanding, as well as to use various types of evidence and proof (Moses & Knutsen, 2007). Processes of verification or falsification themselves cannot be neutral but underlie social conventions (Gergen, 2001).

These considerations on epistemology impact on the research presented here in important ways. Meaning is both constructed in a social context and has value related to that context. The context needs to be clearly specified when communicating new knowledge. The context for this research is higher education in New Zealand, with specific emphasis on academics involved both in teaching and research. The construction of meaning and knowledge has to occur in conjunction with others. The researcher cannot work in isolation, but has to actively work with others from the social environment. For this research, this means to seek contributions from academics in New Zealand higher education, both on individual and group levels. In a complex setting like higher education that encompasses individuals from a wide variety of backgrounds and belief systems, many voices have to contribute to the shared construction of understanding. The knowledge constructed in this research is not absolute truth, but understanding derived from a specific context. This requires detailing the processes that have led to the understanding, which is done by outlining the social context and the methods employed for data collection, analysis and interpretation.

The theoretical perspective that informs this research is postpositivism. This perspective was developed in response to the shortcomings of positivism (Phillips

& Burbules, 2000), which had dominated research both in the sciences and in the social sciences. Positivism is based on objectivist epistemology, where objects in the world have meaning independent of consciousness (Crotty, 1998). Knowledge is objective and empirically verifiable, fact and value can be fully separated (Crotty, 1998). Postpositivism presents a strong departure from the value-neutral goals of positivism (Crotty, 1998).

Postpositivism is cautious about the claims research can make. While postpositivists strive to build descriptions as close as possible to reality, they acknowledge that there is not just one single truth that can be fully captured (Bailey, 2007; Baronov, 2004; Crotty, 1998; Denzin & Lincoln, 2005; Phillips & Burbules, 2000). Acceptance of knowledge cannot be absolute, as in future evidence can be discovered that will render this acceptance as wrong (Phillips & Burbules, 2000). The history of science confirms the viewpoint that there is no absolute truth and that knowledge claims have been proven wrong with passing of time. In the absence of absolute knowledge postpositivists build on current knowledge. In striving to add to knowledge, evidence is important, but at the same time, does not explain everything – it underdetermines knowledge (Phillips & Burbules, 2000). Looking for falsification instead of verification, theories are accepted tentatively, until they can be proven to be false (Crotty, 1998). The respective criticisms on knowledge claims are investigated and sound rationales are developed, forming the basis for advances in knowledge (Baronov, 2004). Postpositivism searches for causal relationships, yet all research commonly can discover is that something has contributed to a cause (Phillips & Burbules, 2000).

Social and cultural values shape scientific inquiry (Baronov, 2004). While acknowledging this influence, postpositivists aim for objectivity in the research process and for value neutrality. Phillips and Burbules (2000) urge to distinguish between external and internal values. External, or epistemologically irrelevant values, such as religious, political or economical values, should not influence research and care must be taken to detect these. While external values can determine what is studied, for example via the availability of grants, this does not mean that these values determine how the study is carried out, maintaining neutrality of internal values. Internal, or epistemologically relevant, values like 'dedication to the pursuit of truth, openness to counter evidence, receptiveness to criticism, accuracy of measurement and observations, honesty and openness in reporting results' (Phillips & Burbules, 2000, p. 54) most certainly need to be upheld.

Postpositivism shapes the research process in a number of ways. Postpositivism supports a pluralism of methods, 'experimental, interview, observational, statistically oriented, interpretive research — or some combination of these' (Phillips & Burbules, 2000, p. 86). While a postpositivist perspective is often connected with a quantitative research approach, it can as well form the basis for a qualitative approach (Bailey, 2007). The choice of type of study depends on what is studied and it is acknowledged that different types of studies can make a contribution (Phillips & Burbules, 2000). Postpositivism allows emphasis both on verification of theories and on discoveries (Denzin & Lincoln, 2005). Most important for postpositivism is that a study is rigorous and competent (Phillips & Burbules, 2000). A researcher following this theoretical perspective will attempt to keep their own feelings separate from the research as much as possible, but being aware of the influencing factor, will acknowledge their own position (Bailey, 2007).

In the conclusions to their investigations on postpositivism and educational research, Phillips and Burbules (2000) state:

> [Postpositivism] is broadly applicable to all inquiries that aim to be competent, and in this sense there is a unity across domains – unity of effective and disciplined inquiry. (p. 94)

The choice of postpositivism as theoretical perspective impacts on this research in a variety of ways. Postpositivism supports a wide range of types of enquiries and with this a variety of research methods, of both quantitative and qualitative persuasion. As there is no absolute source of knowledge, postpositivism suggests building on many sources. The implications for the present research are to investigate the literature and to draw on academics in higher education, using both qualitative and quantitative approaches. Competent enquiry is essential to postpositivist research. This requires thorough planning of the research process and an accurate application of research methods. If these steps are followed it is possible to uphold the integrity of internal values. Throughout the research, integrity and accurate reporting have been goals. It will be up to others to assess if the integrity of internal values has been achieved. Further, readers will have to judge if the researcher has been able to achieve objectivity, despite her background and current position as an academic at a university.

Postpositivism distinguishes between truth and belief. For this research this implies, for example, striving to discover the truth about factors that influence

engagement in learning about teaching, while at the same time acknowledging that individuals and groups can have different beliefs. Considering that postpositivism does not support absolute knowledge claims this research cannot assume to produce absolute truth. The research will have to make more guarded statements that consider the context of the investigation and invite the approval of others by laying the research process open. The research strives to examine if the current understanding of learning about teaching and engagement with teaching, as presented in the literature, can be verified or falsified. The research aims to advance knowledge by answering its research questions and to discover leads worthy of further exploration.

Constructionism, chosen as epistemology for this research, and postpositivism, selected as the theoretical perspective, blend well to form one coherent theoretical framework. Both acknowledge the influence of context on the research. Further, they emphasise the importance of context on situating the research findings. The necessity of working with others to co-construct knowledge matches the suggestion of drawing on multiple sources. A transparent, competent and well-described research process is asked for by both constructionism and postpositivism.

3.2 Research Methodology

Informed by constructionist epistemology and a postpositivist theoretical perspective, this research was conducted in a mixed methods approach. Mixed methods research is defined as containing both quantitative and qualitative approaches in a single study (Teddlie, Tashakkori, & Johnson, 2008). According to Howe (2003), there are no fundamental incompatibilities between quantitative and qualitative methods on either of the levels of data, design and analysis, or interpretation and results. In their discussions on philosophical frameworks for combining quantitative and qualitative approaches, Onwuegbuzie, R. Johnson, and Collins (2009) describe the relationship of the postpositivist paradigm and a mixed methods approach and emphasise the compatibility of both. Postpositivist researchers utilise both descriptive and inferential statistics, as well as qualitative approaches, and among these techniques that assist in the development of quantitative instruments (Onwuegbuzie, R. Johnson, & Collins, 2009).

The combination of quantitative and qualitative research methods is now common (Howe, 2003) and welcome in education research (Pring, 2000). As education

research often addresses multiple research questions, mixed methods research is particularly suited (Wiersma & Jurs, 2009). Howe (2003) recommends conjunctive combinations, where different research methods are applied to the same research questions within one epistemological paradigm. In context of the selection of quantitative or qualitative methods Howe (2003) states:

> Although it often makes sense to emphasize quantitative methods to the exclusion of qualitative methods or vice versa, there are no mechanical rules for making these decisions and no good reasons to avoid combining methods. The only generally applicable criterion is whether, all things considered, there are good reasons to doubt what the researcher claims to have found. (p. 25)

Plano Clark, Creswell, O'Neil Green, and Shope (2008) provide a methods-based definition of mixed methods research. The authors describe the key features of mixed methods approaches as a collection of both quantitative and qualitative data, the analysis of both data sets and the combination of both quantitative and qualitative analysis directions to arrive at an overall interpretation. The authors discuss four major design types, which vary in extent and sequencing of the quantitative and qualitative research parts. One of these design types is exploratory design. Plano Clark et al. (2008) define exploratory design as having two sequential research phases, the first implemented with qualitative methods, the second with quantitative methods. The quantitative phase builds on the results of the qualitative phase. The aim of the qualitative phase is to explore the research topic. Based on the findings of the qualitative phase, a quantitative instrument can be developed and used to seek confirmation or generalisation of the qualitative results. The style of integration of multiple methods in exploratory designs welcomes creativity. The researcher can be open to new sources of information and participants can become contributors to research (Brewer & Hunter, 2006).

The exploratory design suits this research well. In the first research phase the concept of teaching groups was explored. The suitability of the definition of teaching groups, and the structures and characteristics of teaching groups were examined. A qualitative approach was best suited to this phase, as it was research that deals with little-known phenomena, complex contexts and informal linkages in organisations (C. Marshall & G. B. Rossman, 1999). Based on the insights gained from the exploration, questions around teaching groups could be put to a

larger number of participants to assess the potential of the teaching group concept in a wider context. A quantitative approach was suitable for this phase.

3.3 Research Methods

Following on from choosing an exploratory design, this research combined a qualitative phase conducted via focus groups with a quantitative phase conducted via a survey. After describing the ethics approval process, this chapter outlines each of the research phases. The sections combine generic considerations around method selection and characteristics with details on the specific research steps conducted. The validity of mixed methods research depends on the quality of the contributing research phase (B. Johnson & Christensen, 2012). The sections on the qualitative and quantitative phases address, respectively, trustworthiness and validity. A section on legitimation follows to examine the overall research validity of this mixed methods research.

Both research phases were conducted with participants from a New Zealand university. In the remainder of this thesis this institution is referred to as 'the University'. The University shares many characteristics with other universities. The University has multiple campuses and over recent years has intensified its internationalisation strategy. Courses are taught overseas and an increasing number of international students is studying in New Zealand. The University has invested in e-learning tools and has introduced a new learning management system, to be used by all courses. Communication and multimedia technologies are increasingly employed to support all types of deliveries. The University covers a wide range of subject areas. Mergers with other institutions brought with them extensive reorganisation and readjustment from teaching-oriented environments into research and teaching activities. As this brief characterisation shows, the University is a complex organisation that provides opportunities for a rich data collection.

3.3.1 Ethics Approval

As Massey University was the host institution for the degree aspired by the author of this thesis, ethics approval was sought from Massey University's ethics committee. Once this approval was gained, permission to conduct the research was asked for in a separate step from the University as the host institution for the data collection steps.

In the ethics application, issues relating to participant recruitment, confidentiality and potential harm had to be addressed on individual and institutional levels. A potential conflict of interest stemming from the dual roles of the researcher as academic and research student had to be clarified. Background and aims of the project were outlined to allow the ethics committee to judge the significance of the project. The outline focused on the complex situation of higher education today, on concerns about the quality of teaching, and on the challenges of involving academics in learning about teaching. The aim of the project in researching a new approach for increasing the involvement of academics in learning about teaching were presented and the potential of a positive impact on the quality of teaching emphasised, providing the justification for involving participants in the research.

The plans for the focus group and survey research phases were outlined. It was explained how potential participants were to be identified, which selection criteria would be applied and what involvement would be asked from participants. Particular consideration was given to the risk of disclosure of information to academic colleagues in the focus groups. To address this issue, participants were to be alerted to this risk explicitly in information sheets and at the start of the focus group sessions. Participants also were to be made aware of their rights to withdraw from the study at any time and to refuse to answer any particular question. Before the focus group sessions commenced all participants had to sign non-disclosure statements. As the survey responses were to be anonymous, with respondents coming from a large pool of potential participants, the risk of violation of confidentiality was seen as low. No further risks or discomforts were expected for the participants.

This research did not collect data on ethnicity. The assumption was made that the number of Maori, or representatives of other ethnic groups, in the focus groups would likely be too small to draw any ethnicity-related conclusions. As the survey was to be developed based on the focus group outcomes, it did not seem feasible to introduce ethnicity-related questions at this stage in the research.

The ethics application identified a potential risk to participating institutions. Should the research arrive at findings critical of learning about teaching or of other aspects related to these institutions, being associated with the research could be seen as unwelcome. While it was agreed that the participating institutions would not be named, it was acknowledged that, due to the relatively small number of

universities in New Zealand, it would be likely that readers of the research findings could identify these institutions. Ethics approval was received for conducting the focus group research at one institution and the survey research at up to four institutions. Explicit permission was sought from the University for conducting the focus group and survey research phases with its academics. In the approach to the University, the likelihood of identification was emphasised. The permission was granted.

Invitations to participate were sent to potential focus group and survey participants (see Appendices B and C). These invitations emphasised the voluntary nature of participation and provided information detailing the research (see Appendices D and E). This included a brief outline of the motivation for the research, a description of the proposed research steps and procedures, information on the involvement asked for from participants and on the potential risks to participants. The purpose of providing this information upfront was to allow potential participants to make well-informed decisions about participation.

3.3.2 Qualitative Phase

This section justifies the use of focus groups as a data gathering method for the qualitative research phase. It outlines participant selection, question development and focus group conduct. The analysis steps for the focus group data are explained.

Data Gathering Method

The data gathering method for this research phase was focus groups. Focus group research has its origins in marketing research but has now become firmly established in social science research (C. Marshall & G. B. Rossman, 1999). Focus groups are well-suited to be part of mixed methods research designs (Bloor, Frankland, Thomas, & Robson, 2001; Hennink, 2007). Focus groups are effective tools for exploratory research (Hennink, 2007; Litosseliti, 2003). Based on their group context, focus groups are ideal when a range of views on a topic is sought, when debate and discussion is welcome and new insights are to be discovered (Hennink, 2007). Focus groups are useful for examining the shared understanding, language and culture of particular groups (Litosseliti, 2003). It is acknowledged

that individual attitudes and beliefs are not formed in isolation but in the context of opinions and understandings of others (C. Marshall & G. B. Rossman, 1999). The group discussions taking place in focus groups enable participants to develop deeper insights into issues (Hennink, 2007). Having multiple participants partaking in one discussion means that the researcher plays a less influential part than would be the case in an interview situation (Litosseliti, 2003). Participants discuss the different aspects of a problem, can help to identify solutions and often welcome the opportunity to actively add to the research (Litosseliti, 2003).

With these characteristics, focus groups formed a suitable method for the qualitative phase of this research. The focus groups sessions were used to explore the understanding of a particular group, which was academics in universities, on a topic not well understood. This topic, which was learning about teaching in the context of teaching groups, was to be explored in depth and contributions and insights from the participants formed important input into the research process. The discussions among academics gave a better understanding of issues than individual contributions could have provided, as individuals argued from their distinct backgrounds and viewpoints and responded to each other.

The literature names several challenges faced by focus group research (Bloor et al., 2001; Hennink, 2007; Litosseliti, 2003): the nature of the group setting makes it difficult to discuss highly confidential or personal issues; participants need to be selected carefully to give a good representation of the target population; the moderator has to be skilled in facilitating discussion and creating a comfortable environment conducive to open sharing; all participants are to be given the opportunity to contribute and it has to be prevented that single participants dominate the discussions. The topics of this research were suited to focus group discussion as they were not too personal in nature. The other challenges mentioned had to be addressed by careful planning and by the manner in which the research activities were carried out, details of which are being described in the following sections.

Participant Selection

Participant selection for focus groups is discussed by a number of authors (Bloor et al., 2001; Hennink, 2007; Litosseliti, 2003) in a very similar manner and study of their work underpins the subsequent paragraphs. While a number of factors have to be considered carefully, there are no generic answers to questions directed

at best group size or composition. The researcher has to be guided by the specifics of their study.

General recommendations often suggest six to eight participants per focus group session. Yet, studies using focus groups successfully with only three or up to fourteen participants have been reported. Having too few participants might limit the discussion, whereas in groups too large not everyone might get the opportunity to contribute. As there is a risk that not everyone who has agreed to will attend, a low number of invited participants might leave the researcher with too few participants for a session. A large number of participants makes the transcription of audio-recordings complicated as it can be difficult to identify the individual speakers. If the participants have a high level of knowledge regarding the issues concerned, a smaller group might be of benefit to elicit their in-depth knowledge.

The authors cited also talk about strategies for the composition of the participant groups. The right group composition is vital, but again, only general guidelines can be provided with specifics being dependent on the study context. A certain degree of diversity between participants is required to encourage discussion. Yet, if the groups are too heterogeneous, the danger of conflict and suppression of views arises. Purposive selection according to research specific criteria and research objectives is common for focus group research. The selection should cover the range of characteristics given in the population, yet, random sampling is not required as generalisation, as in quantitative studies, is not targeted. Characteristics commonly considered to guide participant selection are gender, age, religion, ethnicity and background in shared experiences.

There are a number of ways for identifying participants, for example by using intermediaries or the researcher's own networks. An important consideration in group selection arises around pre-existing versus purpose-constructed groups. The range between these two options is wide, from a group of close-knit friends to complete strangers, with implications affecting many aspects like recruitment, attendance, disclosure and interaction. The issue of over-disclosure, with participants revealing more information than intended in the heat of discussion, can be a particular danger when working with pre-existing groups. Conducting pilot groups to establish the right group composition is often not possible. In line with the qualitative nature of focus group research later groups can be revised based

on experiences with earlier groups. Despite careful planning one cannot foresee completely how the group discussions will develop.

In terms of the number of focus group that should be conducted, the authors cited earlier again refer to context parameters. For very targeted research investigations fewer groups will be sufficient. For very diverse populations more groups might be needed to cover all participant characteristics. Focus group sessions will produce data of varying quality, with higher quality data requiring fewer sessions. Besides these more content related issues, practicalities play an important role. Focus groups are labour intensive in preparation, transcription and analysis. Funds and time available have to be considered and weighed against the benefits gained from conducting more groups. Hennink (2007) writes that information saturation, that is if no new information arises, is often reached already after three or four focus groups.

The selection of participants and the composition of focus groups for the research reported in this thesis was based on these recommendations from the literature. Invitations to participate in focus groups were sent via email to 400 members of academic staff at the University. The 400 email addresses had been randomly selected from a list of all academic staff at the University, as supplied by the University's human resources section in August 2010.

Forty academics expressed their willingness to participate in the focus groups. While it was attempted to schedule sessions with all 40 academics, scheduling issues resulted in the participation of only 30 academics. A total of seven focus group sessions were conducted, resulting in an average of four participants per focus group. While five or six individuals were invited for each session, circumstances arising at short notice resulted in a lower number of participants per session and the scheduling of replacement sessions. The length of the focus group sessions varied between 70 and 90 minutes. Where possible, participants from different areas of the University were invited to each session. Only one session contained two academics who teach on the same courses. One other session brought together a senior lecturer and a tutor who work on one shared course, with the senior lecturer having a management role. Potential conflicts of interest were discussed at the start of the session and agreements to the satisfaction of both participants affected were reached. With the exception of one group, the participants in the focus groups did not know each other well and in many cases, the participants had not met before.

With participants from different areas in the University and from different academic positions, including teaching-only positions, there was rich diversity in each group. All participants were knowledgeable on the issues discussed and participated willingly. The group sizes allowed each participant to contribute and be heard. All focus group sessions were conducted face-to-face at the home campus of the participants. The researcher conducted all sessions. After concluding the seven sessions the researcher felt that information saturation had been reached and that no further invitations for participation had to be sent out.

Participant Characteristics

The distribution of focus group participants across gender was well balanced, with 16 female and 14 male participants. All campuses of the University were represented. The number of participants from each campus was roughly proportional to the campus sizes. Also, all major units of the University were represented and participation roughly aligned to the unit sizes.

Table 3.1 shows the distribution of participants across academic ranks. A comparison with the profile of academic staff across the University can only be approximated as in the information available the rank of a position is overlaid with job information such as directorship. Within these limitations it can be said that the large number of senior lecturer participants matches their proportion among academic staff at the University, that professors are slightly under-represented in this study whereas associate professors are over-represented. The academic positions can be grouped into ranks with a dual teaching and research focus (professors, associate professors, senior lecturers and lecturers) and into ranks with sole teaching focus (teachers, senior tutors, tutors). Compared to the total number of staff at the University, the distribution of participants across these groupings is representative. Five of the academics who participated in the study have explicit roles in programme leadership.

Table 3.1: Focus group participants per academic rank

Academic Rank	**Number of Participants**
Professor	2
Associate Professor	5
Senior Lecturer	13
Lecturer	4
Teacher	1
Senior Tutor	2
Tutor	2
Research Officer	1

The participants were asked to estimate their focus on the tasks of research, teaching and service over the last two years. Averages were calculated in four ways:

1. Across all participants;
2. For participants who are in positions with research components (taking out the teaching-only positions tutor, senior tutor and teacher) but who do not have explicit roles in programme leadership.
3. For participants who have explicit roles in programme leadership.
4. For participants who have teaching-only positions.

Table 3.2 shows the figures. No comparison numbers across the University are available. What can be taken from the numbers is that the participants in the focus groups have a strong focus on both research and teaching. For the subgroups with programme leadership roles and teaching only positions, the stronger emphasis on service and teaching, respectively, is to be expected.

Table 3.2: Distribution of task focus for focus group participants

Description of Group	Number of Participants	% on Research	% on Teaching	% on Service
All participants	30	24	52	24
Participants without teaching-only roles or programme leadership roles	20	32	48	20
Participants with teaching-only positions	5	4	87	9
Participants with explicit roles in programme leadership	5	13	35	52

Focus Group Questions

The principles of designing questions for focus group research are reported consistently across the literature. Authors like Hennink (2007), Krueger and Casey (2009), Litosseliti (2003), Stewart, Shamdasani, and Rook (2007) suggest to:

- Carefully prepare the questions to be asked and ensure that the material gathered will contribute towards answering the research questions;
- Ask open-ended questions that encourage discussion and exchange among participants; avoid questions that elicit yes/no answers;
- Consider both thinking and feeling questions and be clear on the type of response you want to prompt for;
- Move from the general to the specific; deal with important issues early on;
- Be clear on which questions are of highest value for the research; plan enough time for these questions and probe participants for deeper-level insights;
- Have a topic guide or questioning route that helps the moderator to conduct the focus groups session and assists with consistency between sessions.

Krueger and Casey (2009) provide more detailed suggestions on categories of questions and the processes used to develop these questions. The authors suggest five categories of questions that each play a particular role in the focus group session. Opening questions are designed to get every participant in the group to contribute very early on. These questions should be easy to answer and should not require much time. The purpose of the questions is to create an open, comfortable environment. The answers are likely to contain little information for the research. Introductory questions shift to the topic of the research. These questions are open-ended and allow participants to express their views. The participants might be asked to recall and describe an experience. The questions aim at creating conversation among participants. Transition questions set the scene for the key questions that follow, probing the focus group topics in more depths than the introductory questions. The key questions form the most important part of the focus group session. These questions address the issues central to the research and are given considerably more time than all other questions. The material elicited from the key questions will receive the strongest attention in the data analysis. The ending questions are employed to summarise the discussions. They can be used to ask each participant for a brief closing statement or for requesting feedback from the participants on how the focus group was conducted.

Krueger and Casey (2009, p. 52) provide a process for developing questions for focus groups:

1. Brainstorm: Within a group of people familiar with the study, develop a rough first set of key questions;

2. Phrase the questions: The researcher identifies what seem to be the key questions and edits these; building the questioning route starts;

3. Sequence the questions: The questions are arranged in a sequence following guidelines like general before specific questions;

4. Estimate time for each question: Estimate how much time should be spent on each question;

5. Get feedback from others: Present the questions to the group that participated in the brainstorming and get feedback;

6. Revise the questions: Revise the questions and repeat steps 4 and 5, if necessary several times;

7. Test the questions: Find individuals who match the target population and go through the questions with these like in an interview situation; revise as necessary; do not pilot the questions with a full focus group as this would be expensive; adjustments can be made before the second focus group is conducted.

With the exception of the initial brainstorming step, which was conducted solely by the researcher, the above steps were followed to develop the schedule of questions for the focus group sessions. Appendix F presents the schedule and also provides the alignment with the categories of questions suggested in Krueger and Casey (2009).

At the start of the focus group sessions the participants were shown the researcher's definition of teaching groups. This definition had two anchor points. It looked at the organisational unit staff belong to and at how the teaching undertaken is understood in terms of belonging to a subject area or programme. This definition was the starting point for eliciting how participants see teaching groups and what kind of teaching groups they might belong to. The initial focus group definition is available in Figure 3.1.

Eva's understanding of teaching groups

Based on our positions as academics we belong to one or more groups in relationship to teaching.

There are various ways such groups are defined:

- Staff located in the same organizational unit who teach in one subject area;
- Staff potentially located in different organizational units who teach in one programme.

We cannot choose the members that make up our teaching groups.

Figure 3.1: Researcher's definition of teaching groups

Carrying out the Focus Group Discussions

Besides selecting participants and preparing questions, further issues have to be considered for successful focus group research. The further issues discussed here

are selecting a suitable setting, ensuring good moderation and the recording of data in preparation for the analysis.

The venue for conducting the focus groups needs to provide a comfortable environment that will be free of interruptions and is easily accessible to all participants (Bloor et al., 2001). Stewart et al. (2007) suggest to arrange participants and the moderator in circular form around a table to facilitate group interaction. A table is helpful if the participants are working with documents, if drinks or food are offered, and for participants to feel that they have their own space. It is important that the venue protects confidentiality, preventing others from observing or listening (Hennink, 2007). The time slot for the session needs to be suitable to make it easy for participants to attend (Bloor et al., 2001; Krueger & Casey, 2009). Participants should be personally invited and the value the researcher puts at their contribution sincerely expressed (Krueger & Casey, 2009). Attendance can be improved by providing incentives. These can be in monetary or non-monetary forms and it pays to think closely about what might motivate the target groups of potential participants (Krueger & Casey, 2009).

The participants of the focus groups for this research were academics employed at the University. All sessions were conducted at seminar rooms on the respective campuses. The sessions were conducted at lunchtimes, clear indications of time requirements were provided to participants in advance and adhered to. Light refreshments were offered. The participants were provided with information sheets and all participants were required to sign consent forms before session commencement. A summary of the focus group research phase was emailed to all participants (see Appendix G).

Selection of a suitable moderator for the focus group sessions is crucial. In a research context the moderator is likely to be a member of the research team and as such well informed about the research goals. Krueger and Casey (2009) see the moderator's regard for the participants as one of the most important qualities. The moderator needs to sincerely believe that each participant can make a valuable contribution. The moderator has to listen with sensitivity and try to understand the participants' perspectives. At the same time, the moderator has to guide the discussions and stay in line with the research directions. Stewart et al. (2007) express the challenges faced by moderators:

> Mastering the technique of moderating a focus group is an art requiring a moderator to wear many hats and assume different roles during

> the course of even a single focus group. He or she has the unenviable task of balancing the requirements of sensitivity and empathy, on one hand, and objectivity and detachment on the other. (p. 69)

As the research reported on here is doctoral work, the researcher herself took on the role of moderator. She carefully studied recommendations for good moderating practice. A preliminary focus group session with the researcher's supervisors as participants was held for practice. After each focus group session the researcher reflected on how the session had unfolded to gain insights for conducting the subsequent sessions.

The importance of audio-recording the focus group sessions is emphasised throughout the literature (Bloor et al., 2001; Krueger & Casey, 2009; Litosseliti, 2003; Stewart et al., 2007). Without audio-recordings the richness of the discussions cannot be captured. All focus group sessions were audio-recorded. Explicit permission to do so was obtained from participants in advance.

Data analysis

The analysis of focus group data draws on qualitative analysis methods (Bloor et al., 2001) and with this on the principles of systematic and rigorous investigation (Hennink, 2007). Systematic analysis is a prescribed, sequential process that is deliberate and planned (Krueger & Casey, 2009). The analysis is verifiable, leaving a trail of evidence (Krueger & Casey, 2009). If the analysis is verifiable, a separate researcher, analysing the same data in the context of the given research objectives, should arrive at comparable findings (Hennink, 2007).

The nature of focus groups means that the resulting data are distinct from data collected via many other qualitative methods (Bloor et al., 2001). Focus groups aim at generating discussion. The participants exchange opinions and points of view develop in conversation. Participants interrupt each other and several participants might speak at the same time. To a certain degree, dependent on the approach the moderator takes, the participants drive the conversation. These characteristics make focus group data analysis a challenging task. The analyst has to constantly reflect on a number of issues (Stewart et al., 2007): Does the order of points made relate to importance? Is there meaning behind not mentioning something? Does time spent on a topic relate to importance? What strength of emotion was behind a statement? Focus groups are generally chosen as research methods for the purpose of understanding, canvassing a range

of views and for gaining insight into how people perceive a situation (Litosseliti, 2003).

The level of detail in the analysis of focus group data varies (Hennink, 2007). The nature of the analysis is determined by research questions and the purpose of the study (Krueger & Casey, 2009; Stewart et al., 2007). The general steps of focus group data analysis include familiarisation with the data, identification of themes, analysis and synthesis of themes, and the development of broader theoretical conclusions (Hennink, 2007). The reporting of quantitative statements should be avoided due to the small number of participants in focus group research (Krueger & Casey, 2009; Stewart et al., 2007).

Academic focus group research requires detailed description of data (Bloor et al., 2001). Analysis without transcripts runs the danger of loss of information, superficial and selective analysis work (Bloor et al., 2001). The following is suggested to prepare for rigorous analysis of focus group data (Bloor et al., 2001; Hennink, 2007; Krueger & Casey, 2009):

- Transcribe word-by-word without summarising and interpreting;
- Leave sentences as they are, even if incomplete or grammatically incorrect;
- Include sounds like laughter, exclamations or long periods of silence that could assist in the analysis;
- Transcribe all speakers, not just the dominant ones, and identify all speakers.

The motivation behind these suggestions is to capture the focus group discussions as closely as possible. It can be beneficial to supplement the transcripts with notes on non-verbal behaviour taken from observations (Stewart et al., 2007). Transcription of focus group sessions is complex. The time required will depend on a variety of factors with estimates ranging from three to eight hours of transcription work per hour of focus group recording (Bloor et al., 2001; Hennink, 2007; Krueger & Casey, 2009). If possible, the researcher should do the transcription themselves as this increases the familiarity with the data (Bloor et al., 2001; Krueger & Casey, 2009; Litosseliti, 2003). Focus group data analysis is a sequential and continuous process. It is helpful to transcribe and preliminary analyse each focus group session before conducting any further sessions (Krueger & Casey, 2009; Litosseliti, 2003).

The analysis step after transcription and general familiarisation with the data is the identification of themes. Themes can be 'topics, issues, concepts, influences, explanations, events, ideas' (Hennink, 2007, p. 220). Two analysis directions are possible and are commonly mixed in focus group research: an inductive, grounded theory approach in which themes emerge from the data; the explicit specification of themes based on the focus group questions and a search for these themes in the data (Hennink, 2007). Stemming from the characteristics of focus group data, the researcher has to be careful not to lose track of context and conversational flow (Bloor et al., 2001). It is important to check how an argument has developed and if the statements of a participant are consistent (Bloor et al., 2001). The range of views among the participants has to be represented (Krueger & Casey, 2009). Researcher bias, such as listening to the dominant voices, and generalising individual comments, has to be prevented (Litosseliti, 2003). The analysis first focuses on individual focus groups and from there looks for similarities and differences between groups (Litosseliti, 2003). Computer programs provide useful tools for supporting the data analysis (Bloor et al., 2001; Krueger & Casey, 2009; Stewart et al., 2007). NVivo[1] is one of the programs commonly suggested.

Various strategies are available for moving from analysis to interpretation. The analytical framework of 'constant comparative' focuses on identifying patterns in data and discovering relationships between ideas and concepts (Krueger & Casey, 2009). It is used for the development of theory and includes the steps of grouping of data, naming groups as categories and setting categories in relationship to each other. Important is that theories are grounded in data (Hennink, 2007). Results need to be stated clearly and the implications of the research have to be demonstrated (Litosseliti, 2003). The findings of the focus group study should be linked back to the research objectives, outcomes explained and new questions for further research presented (Litosseliti, 2003).

This review of the literature on the data analysis in focus group research gave fairly clear recommendations for this research: the data analysis must be rigorous, systematic, continuous and verifiable; comprehensive transcripts are essential; a qualitative analysis tool like NVivo will be helpful in managing the analysis tasks; and the analysis needs to work closely with the data. Based on the exploratory nature of this research a largely inductive analysis approach was chosen, where working with the data led to the development of themes, hypotheses and theories.

[1] http://www.qsrinternational.com/products_nvivo.aspx

In the preparation for the analysis of the focus group data the audio recordings of the focus group sessions were transcribed by a transcriber. A transcriber was used due to the workload of the researcher. The transcription recorded the speakers and the words spoken. It also indicated longer pauses in the conversations and utterances such as laughter. Differences in intonation or emphasis were not captured. The analysis was based mainly on the transcripts. On several occasions, reference to the recordings was taken to verify aspects of the transcripts.

As a first step, all transcripts were read to gain a general overview and to refresh the memory of the researcher, who had conducted all focus groups. Based on the research questions, key points of interest were identified. Using the qualitative analysis program NVivo, nodes were defined. The transcripts were coded by applying the nodes. While working closely with the transcripts, the list of nodes was extended. In some cases the coding was restarted with a refined set of nodes. Table 3.3 shows the nodes used for coding. About 500 instances across the seven transcripts were coded.

Table 3.3: Nodes in NVivo used for coding the focus group transcripts

Admin or structural problems
Coming from a teaching culture
Focus on research
Interaction in teaching group
Interaction not happening
Interaction outside teaching group
Leadership in teaching
Need to work together
Other
Personalities of academics
Physical location issues
Pressures on unit
Quality of teaching
Reflection on self
University's e-learning system
Value of teaching

After coding all transcripts, NVivo was used to display all interview sections relating to a node or combination of nodes. All coded sections were re-read to see what patterns would emerge across all the focus groups. From there interview sections were extracted and put into a word processing document as quotes. These quotes were sorted into themes and commented on by the researcher. Frequently sections of the transcripts were re-read to follow up new ideas or to verify what had been said in the focus group sessions. This resulted in a document of about 30,000 words containing a large number of direct quotes.

After completing this document all interview transcripts were read again. This was done to see if any themes relevant to answering the research questions had been omitted or if any inconsistencies between the focus group conversations and the analysis document could be found. In response, several minor adjustments to the analysis document were made. Additional quotes were extracted and integrated.

During the writing of the analysis document the researcher continuously referred back to the research objectives and questions to keep the focus of the analysis on track. The researcher also reflected on the meaning of what was said by the focus group participants and on how the analysis would contribute to answering the research questions. Various models for extracting meaning were developed, with most of these being discarded as the analysis proceeded. Thought was also given to how this qualitative research phase would inform the quantitative phase to follow. What should be extracted from the focus group research to be put forward as hypotheses to the survey research?

An approach for guiding the interpretation of the focus group data was finally chosen. Based on the analysis document that had been produced, and renewed reference to the transcripts that allowed re-focusing on the contributions of each participant in a holistic way, the interpretation document was produced and the hypotheses and goals for the survey phase of the research developed. Examination of these hypotheses was to confirm or refute patterns discovered in the qualitative research phase. Examination of the goals was to establish base data from a larger population.

Trustworthiness

The term *trustworthiness* is used to refer to the soundness of qualitative research (C. Marshall & G. Rossman, 2011). One seeks research that is ‘plausible,

credible, trustworthy, and therefore defensible' (B. Johnson & Christensen, 2012, p. 264). Andrew and Halcomb (2009) suggest focusing on examination of the trustworthiness of data collection and analysis processes when working within a postpositivist paradigm. Following criteria suggested by Andrew and Halcomb (2009), a number of measures were taken to work towards trustworthiness of this research phase:

- A clear articulation of research questions is important as it directs data collection and analysis. This advice was followed in this research by stating the research objectives and questions at the outset.

- An aspect of triangulation is the use of multiple sources of data, facilitating trustworthiness by comprehensive data collection and analysis, leading to a convergence of patterns. As the data on seniority, subject area and research/teaching positions indicate, the participants in this research represented a wide variety of academic backgrounds, providing this research with multiple sources of data.

- To establish auditability, the researcher should provide a clear audit trail of data collection, analysis and decision making. This has been attempted in the thesis, by outlining the steps taken for invitation of participants, preparation and conduct of focus groups, by providing participant characteristics and data analysis steps.

- Invitation of expert critique, through the sharing of research steps and findings with other researchers, is recommended for increasing trustworthiness. This has taken place in this research in the form of repeated discussions with the research supervisors, who, throughout the project, critiqued the work undertaken.

- Member checking is suggested to reduce potential misinterpretations of participant contributions by the researcher. A summary of the focus group findings was sent to participants to facilitate such feedback loop. While several participants acknowledged the receipt of the summary, no corrections or suggestions were provided.

3.3.3 Quantitative Phase

This section justifies the use of a survey as a data gathering method for the quantitative research phase. It outlines participant selection, survey questions, survey distribution and analysis steps. As this quantitative phase was the second research phase of a mixed methods approach, the survey questions were developed in response to the analysis results of the preceding qualitative research phase. The survey questions are presented in this section. How the questions were arrived at is outlined throughout Chapter 4.

Data Gathering Method

This quantitative research phase aimed to confirm and generalise findings from the preceding qualitative research phase. Based on these findings hypotheses and goals were specified for testing in this quantitative phase. Surveys are appropriate methods for such targeted investigations (Krathwohl, 1997).

The survey instrument was a self-completion questionnaire, administered in electronic format. The use of a questionnaire is standard for conducting a survey (Fraenkel & Wallen, 2006; Krathwohl, 1997). An electronic format is faster and more cost-effective than a paper-based version (Krathwohl, 2009; Wiersma & Jurs, 2009). In terms of response rate, no general statement can be made about which form of delivery will be more effective (Wiersma & Jurs, 2009). Issues that can affect electronically administered questionnaires are the risk of invitations being dismissed as junk mail or the identity of the respondent being revealed via an address field (Krathwohl, 2009). The tools and procedures used for the surveys have to consider these points.

The survey was administered using the SurveyMonkey system[2]. The survey invitation was sent via email on Tuesday, 26 July 2011, and two reminders were sent to addressees who had not responded before closure of the survey. The survey was open for two weeks. SurveyMonkey was used with settings that makes it impossible to trace the identity of participants. The identification of non-respondents was handled by SurveyMonkey, without the researcher knowing the identity of the individuals the reminders were sent to. The survey system allows addressees to opt out, preventing reminders being sent to these individuals. Filling out the survey implied consent, as was outlined to participants in the

[2] `http://www.surveymonkey.net`

informations sheet (see Appendix E). Participants were invited to provide their contact details to the researcher (via an email separate from filling out the survey) to be sent a summary of the survey research findings. Several participants asked for this summary, which is shown in Appendix H.

The target population for the survey were academics at the University. The invitations were sent to the official university email addresses of the academics using an appropriate subject line, minimising the risk of delivery failure and issues with spam filters. Accessing electronic systems and use of email are part of the standard working environment of academics. Using an electronic survey format and email as the medium for sending out invitations to participate was therefore suitable for this research. The survey took place in weeks two and three of the teaching semester. This time early in the semester is seen as most suitable for surveying academics, who will have had time to get their courses started but are not yet busy with assignment marking or exam preparation.

Successful survey research provides tight operational definitions to limit subjectivity and to arrive at measurable items (Carspecken, 1996). The facts, attitudes or behaviours to be measured need to be operationalised (May, 2001). A common understanding of the term *teaching groups* was central to this survey. The definition of teaching groups was refined after the focus group research phase. The resulting definition, together with examples, was provided to participants at the start of the survey and is provided in Figure 3.2.

Survey Questions and Piloting

The two principal forms of question types are open and closed questions (May, 2001). Closed questions limit the number of possible answers, are quicker to analyse and facilitate comparison between answers. Open questions allow the respondents to answer in their own words. Questions on demographics are called classification questions (May, 2001). Answers to these questions allow grouping of the participants during the analysis in attempting to explain phenomena.

In this questionnaire the majority of questions was presented as closed questions. The participants were asked for their agreement/disagreement with statements provided and had to choose from a Likert-scale range of responses. The questionnaire also contained open-ended questions that invited free-form comments.

Understanding of 'Teaching groups'

Based on our positions as academics we belong to one or more groups in relation to teaching.

Such groups can be characterized by looking at:

- How the membership is composed in terms of organizational unit.
- If the members come from one or multiple disciplines.
- If the members teach into one paper, subject area or programme.

Such groups are referred to as 'teaching groups' in this survey.

Examples for teaching groups might be:

Academics in a Finance department teach Finance papers across a range of programmes.

Academics from various departments teach the Media Studies major of a BA.

A subgroup of academics within an English department teaches a paper on Written Communication.

Engineers, Microbiologists and Chemists who are in one department teach into the Food Technology degree.

Figure 3.2: Revised teaching group definition

The survey was structured into four parts. The first part focused on membership in teaching groups and characteristics of these groups (Questions 1 to 19). The very first question in this part acted as a filter. Participants who answered that teaching groups were not applicable to their situations were immediately directed to part two of the survey. Part two asked questions about the situations and understandings of participants unrelated to teaching groups (Questions 20 to 31). The third part focused on demographics. The last part contained only one question, providing participants with the opportunity to comment on the survey overall. Appendix I lists all questions.

Piloting or testing of questionnaires are essential research steps (Fraenkel & Wallen, 2006; Krathwohl, 2009; May, 2001). Following this recommendation the questionnaire was piloted to ensure that the questions expressed the intentions of

the researcher. Three individuals were asked to fill out the questionnaire and provide feedback. Two of these individuals were academic developers who are very familiar with academic contexts, and one was a recently retired academic. In personal conversations with these three individuals, the researcher elicited feedback on the number and clarity of questions, the suitability of terminology and the interpretation of key concepts. In response, several aspects of the questionnaire were modified. For example, the questions relating to leadership were extended to better reflect the organisational levels in universities. Procedures similar to such a 'walk-through' are described in the literature (Krathwohl, 2009; May, 2001).

Data analysis

The statistical analysis on the survey data was carried out with help from the statistical analysis package R[3]. The types of analyses possible are determined by the nature of the data collected. The data from the Likert-scale type questions are non-parametric. They are ordinal data that can be ranked. The responses to the demographic data are non-parametric, nominal data. They provide the independent variables. The dependent variables stem from the Likert-scale type questions. The design is unrelated, as there is only one score (per Likert-scale type question) for each participant. Two groups of tests can be carried out. The first group are tests that measure the influence of experimental conditions, in this research expressed as the values for the independent variables. The second group looks at the relationships between the variables. Information provided in the responses to the open-ended questions cannot be statistically analysed but contributes to the interpretation of the results.

Sampling

The first step in sampling is to define the target population (Fraenkel & Wallen, 2006). The target population for the survey were academics at the University. The list of email addresses obtained from the human resources section of the University in August 2010 contained entries for academics outside the scope for this study. These were academics in senior leadership roles, advisory roles and research-only roles. A new list was therefore requested in July 2011 based on academic job titles indicating research and teaching or teaching-only responsibilities. Casual

[3] http://www.r-project.org/

staff were excluded from the sample. Several refinements had to be made to the list. The focus group participants were removed from the list, as were entries without email addresses or duplicate email addresses, or entries for academics with conflicts of interest. After deducting the number of undeliverable emails, this amounted to a total survey population of 1078 academics. The decision to not survey focus group participants was based on the earlier involvement of these individuals in the research. Their prior engagement with the topics of the survey questions meant that these academics would not be representative of the general academic population targeted and that their inclusion would have the potential to bias the data.

Participation Rate

In total, 324 individuals responded by filling out the survey, resulting in a participation rate of 30%. A number of participants did not answer all questions. The number of answers per question has been taken into account throughout the analysis and is reported as part of the analysis results. For the majority of questions about 280 or 26% of the target population provided answers.

Participant Demographics and Comparison to Target Population

Table 3.4 shows the self-reported demographics of the participants. Comparisons between target population and participants were undertaken by calculating the percentage difference for each answer option. The percentage of women among the participants who have provided their gender is 4.99% higher than the percentage of women in the target population (43 participants did not provide gender information).

The distribution across job titles between the total population and the participants differs only by an average of 1.46% (41 participants did not provide their job title). The groups with the biggest differences between population and participants are senior lecturers and lecturers. The percentage of senior lecturers in the participants is 6.99% higher, the percentage of lecturers in the participants is 3.11% lower.

The distribution across colleges or units between the total population and the participants differs only by an average of 1.88% (44 participants did not provide their affiliation).

Table 3.4: Self-reported demographics of survey participants

Category	**Detail**	**Number**	**Percentage (based on number of answers per question)**
Gender	Male	139	49.47
	Female	142	50.53
Job Title	Assistant Lecturer	3	1.06
	Lecturer	55	19.43
	Senior Lecturer	124	43.82
	Associate Professor	26	9.19
	Professor	27	9.54
	Graduate Assistant	2	0.71
	Tutor	14	4.95
	Senior Tutor	22	7.77
	English Language Teacher	7	2.47
	Senior English Language Teacher	3	1.06
College/Unit	College I	52	18.57
	College II	16	5.71
	College III	35	12.50
	College IV	98	23.93
	College V	98	35.00
	Other Units	12	4.29
Employment	Half-time or less	17	6.00
	Between half-time and full-time	22	7.77
	Full-time	244	86.21
Position requires to do research	Yes	232	81.69
	No	52	18.30
Significant part of position relates to leadership role in a programme	Yes	124	44.77
	No	153	55.23

For employment type (part-time/full-time), requirements to do research and leadership in a teaching programme no comparison values are available for the target population.

Of the participants 44.77% who answered the question, 124 answered with 'Yes' to the question 'A significant part of my role relates to leadership in a teaching programme'. This is a higher proportion than expected. The motivation behind the question was to find out if a participant had a role like programme director. It seems that the participants have interpreted this question differently and for example might have regarded roles as course coordinator as significant leadership in teaching. Further research would have to clarify this.

Overall, it appears that the demographics of the participants are fairly closely matched to the demographics of the target population. However, it needs to be emphasised that the participants do not represent a random sample of the target population.

Distribution of Time across Research, Teaching and Service

The participants were asked to estimate their focus on research, teaching and service over the last two years. The answers show that academics spend about 54% of their time on teaching. Even when considering only participants with research responsibility, this percentage drops only to about 48%. Participants without research responsibility spend about 75% of their time on teaching. A leadership role in teaching hardly affects the proportion of time spent on teaching, but causes a transfer of about 6% from research to service. Table 3.5 provides the details for the distribution of time. What might be important to note is that academics with research responsibilities say that they spend close to half of their time on teaching, making the amount of time spent on teaching larger than the amount of time spent on research. No comparison data on distribution of time are available for the target population.

Comparison of Questions Relating to Research Obligations

The survey contained three questions that address research obligations of participants. Question 33 asked for the job title of the participants, Question 37 asked the participants if their position requires them to conduct research and Question 36 asked how much of their time was spent on research. Job titles imply if an academic has research responsibilities. For example, a lecturer would typically

Table 3.5: Distribution of time across research, teaching and service

Subset of Participants	**Area**	**Minimum (%)**	**Maximum (%)**	**Average (%)**
All (based on 270 complete answers)	Research	0	95	28.66
	Teaching	5	100	53.53
	Service	0	80	17.81
Participants with research responsibility and without leadership role in teaching programme (113 participants)	Research	0	85	35.88
	Teaching	5	94	48.35
	Service	0	60	15.76
Participants with research responsibility and with leadership role in teaching programme (110 participants)	Research	0	70	29.75
	Teaching	15	95	48.71
	Service	0	80	21.54
Participants without research responsibility and without leadership role in teaching programme (35 participants)	Research	0	95	10.57
	Teaching	5	100	77.57
	Service	0	80	11.86

be expected to conduct research whereas a tutor typically would not be expected to conduct research. As expected, the analysis of variance (ANOVA) between these questions demonstrates a significant influence of the independent variable (see Table 3.6).

Table 3.6: Comparison of questions relating to research obligations

Independent Variable	**Dependent Variable**	**ANOVA**
Q33 - Job title	Q36 - Requires research	Df=274, 274.68, p=.000
Q33 - Job title	Q37 - Time on research	Df=274, 30.717, p=.000
Q36 - Requires research	Q37 - Time on research	Df=274, 88.352, p=.000

Yet, not for all participants is there a clear match between requirements of a position in terms of research based on job title, statement of research responsibility and time spent on research. Participants who state that their position does not require them to do research say that they nevertheless spend 8.37% of their time on research.

Tutors who participated in the survey spend 13.85% of their time on research, senior tutors 5.95% and English language teachers 5.71%. Some of these participants will be employed part-time and Question 36 did not explicitly refer to employment time when asking for percentages of time spent on research. This can have led to an over reporting on time spent on research as part of the participants' jobs.

Overall these numbers indicate that there is some difference between position requirements and actual behaviour. This is not investigated further in this research, but could be addressed in future research.

Non-Response Bias

A survey with a low response rate faces the danger that non-respondents to the survey would have provided different responses from the participants, resulting in non-response bias. To estimate the non-response bias one can look at differences in responses based on when the response was made in relation to the call for participation. The non-response bias is low if later respondents answer questions similar to early respondents (Armstrong & Overton, 1977). Should later respondents answer differently from early respondents, this would indicate that the respondents are not representative of the overall population.

The first survey invitation was sent on Tuesday, 26 July 2011. This was followed by a first reminder on Monday, 1 August 2011, and a second reminder on Thursday, 4 August 2011. One can group the responses into three waves: wave 1 are responses based on the first invitation given before the first reminder; wave 2 are responses between the two reminders; and wave 3 are the responses after the second reminder. Table 3.7 shows responses sorted by waves across several questions. A comparison of the values shows for the majority of questions no trends from early to late responses. This indicates a low non-response bias and suggests that the respondents of the survey are representative of the population.

Table 3.7: Comparison of answers across response waves

Question (Range for answer options)	**Wave 1 Averages (Number of responses)**	**Wave 2 Averages (Number of responses)**	**Wave 3 Averages (Number of responses)**
Q1 (0 - 1)	0.932 (146)	0.955 (110)	0.953 (64)
Q3 (0 - 3)	1.593 (123)	1.631 (95)	1.650 (60)
Q4 (0 - 4)	2.447 (123)	2.642 (95)	2.517 (60)
Q19 (1 - 5)	3.730 (122)	3.564 (94)	3.661 (59)
Q22 (1 - 5)	4.242 (128)	4.171 (99)	4.167 (60)
Q23 (1 - 5)	3.977 (129)	4.040 (99)	4.000 (60)
Q27 (1 - 5)	4.539 (129)	4.398 (98)	4.458 (59)
Q28 (1 - 5)	2.837 (129)	2.838 (99)	2.914 (58)
Q31 (1 - 5)	3.850 (127)	3.818 (99)	3.810 (58)

Validity and Reliability

Validity and reliability are important concepts in quantitative research. Validity refers to the suitability of a research instrument to measure what is supposed to be measured. It addresses the inferences researchers make based on the data they collect, looking at their appropriateness, correctness, meaningfulness and usefulness (Fraenkel & Wallen, 2006; May, 2001). Reliability is achieved if a repeated application of an instrument results in the same findings (Fraenkel & Wallen,

2006; May, 2001). Validity and reliability are closely related concepts and both need to be fulfilled for a valid study (Krathwohl, 2009).

A number of steps have to be undertaken to ensure validity and reliability of the survey research phase:

- The sample needs to be representative of the population to ensure that claims can be generalised and that results are statistically significant (May, 2001). For this study the surveyed sample of academics needed to be representative of the target population. Section on sampling outlines the steps undertaken to examine representativeness.

- Content-related evidence needs to be gathered to ensure that the content of the questions asked is appropriate for the types of conclusions to be drawn and that the questions are presented in appropriate form (Fraenkel & Wallen, 2006). This has been achieved by careful survey design, both in relation to content of questions and format. The piloting phase has contributed towards achieving this goal.

- Criterion-related evidence refers to the comparison of the results arrived at with the current instrument to the findings of an independent criterion measuring the same variable (Fraenkel & Wallen, 2006). This research uses correlation coefficients to examine the degree of relationship between answers to related questions in the same survey that address the same variable.

- Construct-related evidence compares the findings from administering the instrument against predictions gained from theory (Fraenkel & Wallen, 2006). The idea is to compare the findings against multiple forms of other evidence and to verify results both logically and empirically. The literature research phase of this work has resulted in a number of theories against which the survey finding are compared. This allows for logical verification of results.

- To assess reliability internal consistency can be calculated for a single administration of an instrument (Fraenkel & Wallen, 2006). This is often done via the Cronbach alpha coefficient. This was not done in this research, as the questionnaire for the survey did not have separate questions assessing the same or closely related constructs.

As the survey research phase was part of a wider mixed methods approach appropriate steps to ensure the legitimation of the research overall had to be undertaken. These steps are outlined in Section 3.3.4.

3.3.4 Legitimation

Onwuegbuzie and R. Johnson (2006) suggest the use of the term *legitimation* for describing the assessment of the quality of mixed methods research, avoiding associations linked to the term *validity*, as these exist especially from a quantitative research paradigm. The steps undertaken to address trustworthiness and validity in the qualitative and quantitative research phases that combine to the mixed methods approach in this research, have been examined in earlier sections (3.3.2 and 3.3.3). Following recommendations by Onwuegbuzie and R. Johnson (2006), this section looks at steps towards legitimation that address the overall mixed methods design.

To achieve sample integration legitimation researchers have to be careful when drawing meta-inferences from the qualitative and quantitative research phases, especially when the sample populations have come from different groups. In the research reported on in this thesis the two sample populations have come from the same overall population (academics at the University), yet have been distinct (the focus group participants have been excluded from the questionnaire). This design should allow to carefully draw conclusions for the overall population.

Weakness minimization legitimation states that a mixed methods research needs to be deliberately designed so the strengths of one approach compensate for the weaknesses of the other approach. In this research both phases are tightly connected. The first phase builds on the strengths of a qualitative approach in allowing for in-depth exploration and investigation. One outcome of this phase is the specification of the survey questions that are used to seek confirmation from a much wider basis of participants.

Conversion legitimation suggests that inferences made after quantitisation of qualitative data or qualitisation of quantitative data must be carefully reviewed. This study contains some cross-over between paradigms. Numbers on the types of teaching groups are derived from the qualitative data and from the quantitative research phase quality judgements on teaching groups are derived. Caution is advised by the researcher, for example by stating that the survey instrument is new and that further work will be required to draw firm conclusions.

Paradigmatic mixing legitimation refers to issues that can arise from combining research phases that come from potentially fundamentally different viewpoints. The researcher of this thesis has laid out her theoretical assumptions in the thesis and finds that these are compatible with both research phases.

3.4 Chapter Summary

This chapter has presented the theoretical framework for this research. The theoretical underpinning of this research is based on constructionism and postpositivism. The research follows a mixed methods approach, using an exploratory design. The first research phase is of a qualitative nature and is implemented via focus groups. The second research phase is of a quantitative nature and is conducted as a survey.

Both research phases were conducted with participants from one New Zealand university. Thirty academics from a variety of groupings and representing all academic ranks participated in the focus groups. Survey responses were provided by 324 academics. Comparisons to the target population indicate that the participants are representative of the academics of the University. The following chapter presents the findings of the focus group research phase.

Chapter 4

Focus Group Findings

The focus groups sessions provided rich data, containing far more detail than can be shown in this thesis. This findings chapter is structured around the four main research questions and the associated auxiliary questions, as presented in Section 2.5.2. It is shown how the focus group data contribute towards answering the research questions from a qualitative perspective. Hypotheses and goals for the subsequent quantitative research phase are developed. The last section in this chapter provides a summary of both the qualitative findings and the directions taken forward into the quantitative research phase. Throughout the chapter, the focus group participants are referred to as P1 to P30.

4.1 Do Academics Belong to Teaching Groups?

The analysis of the participants' statements in regard to their understanding of, and membership in, teaching groups followed the two anchor points present in the researcher's initial definition (see Figure 3.1). The organisational units staff belong to and the teaching focus were extended during the analysis based on the responses of the participants, leading to the following options.

Organisational unit: Looking at the organisational structures that house the members of a teaching group.

- One unit with focus on a single subject area;
- One unit with multidisciplinary focus;
- Multiple units.

Teaching focus: Looking at how the teaching focus of the teaching group was expressed.

- Teaching one specific course;
- Teaching into one single subject area;
- Teaching into one specific degree or programme of study;
- Teaching into multiple subject areas or degrees or programmes of study.

The analysis preserved how the participants expressed their belonging to organisational units and teaching focus. It shows the layers they used to situate themselves within the wider structures of the University. For example, one participant named the physics groups as organisational unit and physics as teaching focus. The participant could have chosen to look at finer grained units dealing with areas like geophysics, molecular physics or quantum physics. The participant could have used the wider organisational unit that houses, besides physics, disciplines such as mathematics and chemistry, as reference point. Instead of looking at teaching physics in general the participant could have referred to specific courses, like introductory physics for engineering students. Another option would have been to refer to the various degrees or programmes of study physics contributes to. All of these alternatives would be valid options for defining the participant's teaching group context. Yet, what is important for this study was to present the participants' own understanding of their context.

4.1.1 Teaching Groups of Participants

All participants were able to relate to the concept of teaching groups presented to them and could describe their own teaching group. For some participants this was a clear match, for others their circumstances required more explanation, as the statements by participants P2 and P28 show.

> P2: It actually fits me to a tee because I'm within the [subject name] organisation and that we all teach the same subject area.

> P28: I think the [college name] is even more complex because we have probably got various disciplines within a discipline; [subject name] is linked to a whole lot of discipline curriculum areas that are taught.

> And also some areas like mine which go right across those discipline areas.

Some participants, such as P2, see themselves as belonging to more than one teaching group. These additional teaching groups have been captured.

> P2: You got the nucleus being you know those who teach in the one subject area, then you've got all the overlaps on the edges, you've got your other groups that you belong to.

In some cases, the participants referred to a specific course as the basis for their teaching group and indicated that a new course they will be involved in would build the basis for a further teaching group. In these cases, only the current teaching group was captured. One participant saw their main teaching group in a group of teaching award winners located across the University. This group is not listed in the analysis, as it does not fit the premise set for this study, which looked at groups of academics who teach together. Yet, the experiences of the participant with this group have contributed to the focus group discussions and were captured as such. The participant could identify a secondary teaching group, which has been included directly in the analysis.

Appendix J lists all teaching groups identified by the participants, ordered by relationship to organisational unit and teaching focus. The relevant academic subjects are named. Each entry in the list stands for one teaching group. Table 4.1 provides a summary identifying where participants see their teaching groups located. This table emphasises where the majorities of teaching groups are located by counting the number of teaching groups.

The largest concentration of teaching groups is where academics from one single subject area see themselves as teaching into one single subject area. This is followed by teaching groups where academics from one organisational unit with a multi-disciplinary focus teach into one degree or specialisation within a degree. All three teaching groups at the intersection of one organisational unit from a single subject area teaching a specific course, have been named by participants who are employed as tutors.

The two single entries in the column of teaching focus into multiple areas or degrees, stem from participants who both clearly could identify their teaching groups. Both groups stem from one organisational unit, one with single subject focus and one being multi-disciplinary. For three cells of the table no teaching

Table 4.1: Number of teaching groups in relationship to organisational unit and teaching focus

	Specific course	**Single subject area**	**One degree / specialisation within degree**	**Multiple subject areas / degrees**
One unit, single subject area	3	12	0	1
One unit, multi-disciplinary focus	0	0	6	1
Multiple units	2	3	3	2

groups were named. It cannot be excluded that further participants might have located their teaching groups in these areas.

The background to the teaching groups with members from multiple organisational units, shown in the last row of the table, seems to be dominated by two characteristics. First, the organisational structure of the colleges the academics belong to, builds on research interests instead of teaching areas or programmes. As a consequence, staff from different organisational units have to come together for teaching. Second, a number of the degrees or teaching programmes concerned are strongly multi-disciplinary in nature, therefore needing to draw on a wide range of academics for teaching and in some cases also including non-university teachers.

4.1.2 Teaching Group Parameters

During most focus group sessions the participants were asked about the number of members that make up their groups. For 19 teaching groups this information was collected. The smallest number of members named was two. This was for a group that had five members a few years ago but has now shrunk. The largest teaching group size stated was 15 to 20. This calculates to an approximate average size of eleven teaching group members.

Teaching groups do not exist in isolation but are surrounded by wider groupings. The importance of connections to others outside one's teaching group was emphasised. Participant P14 describes the layers of their teaching groups. While most participants stressed connections across courses, degrees and teaching groups, tutors seem to be a group of staff who are much more restricted in their interactions, as the statement of participant P7 indicates.

> P14: You've got your little immediate group, but you've got these concentric rings of umbrellas that get bigger and bigger.

> P7: Tutors tend not to get the opportunity very often to go across [courses].

When talking about the composition of their teaching groups, a number of participants mentioned the employment status of group members. It seems that some areas of the University employ a fairly high number of part-time and fixed-term staff. Some programmes of study are taught with the help of non-university staff who are seen as members of the respective teaching groups. An issue with regard to group member status is that in some areas academics are members of a large number of teaching groups. This occurs in settings were organisational units are based on research interests and academics are spread across a larger number of courses to accumulate sufficient teaching loads. These issues were not explored in this study but it could well be that there are implications for teaching groups.

The participants were not asked directly how long their teaching groups have been together or how frequently membership changes. Yet, several comments made allow for some insights into the fluidity of teaching groups. For tutors, it seems that there is a relatively short period of a semester or a year in which a decision about staying or leaving in a tutoring position is made. Tutors who stay beyond this initial period seem to be involved long-term. For the other groups of academic staff, it is not possible to draw comparable conclusions from the data collected. Some participants explained how their groups had shrunk over the last years, no new appointments are made and staffing has become tighter in general. There were indications that the remaining academics stay with their units for long time. On the other hand, some comments alerted to changes in staffing, the consequences of which were particularly noticed in cross college collaborations. Changes in staffing seem to impact on communication

across campus boundaries, making it difficult to maintain working relationships, as participant P24 described.

> P24: Sometimes as fast as we develop relationships with people in [college name] they seem to leave.

As indicated by the participants, frequent changes in staffing, and reductions in staff numbers, have an important impact on teaching across the university, beyond the units that are the immediate focus of the changes. This impact will have informed the experiences of participants, but has not been addressed more directly in focus group discussions and analysis.

The researcher's definition of teaching groups presented to focus group participants (see Figure 3.1) contained the assumption that academics cannot choose the colleagues they teach together with: 'We cannot choose the members that make up our teaching groups.' Only a few participants commented on this assumption. One participant thought that the multi-campus nature of the University provides some form of choice in as far as it is up to the individual to decide how closely to collaborate with colleagues at other campuses. On the other hand, a different participant saw exactly the multi-campus nature of the University as argument in support of the statement that one cannot choose members of one's teaching group. No further discussion on this issue took place and no further comments were made that would indirectly challenge or confirm the assumption. As the participants presumably would have challenged a disagreeable statement, it can be assumed that the participants agreed or at least do not have strong objections.

The participants made frequent references to the multi-campus nature of the University. Mostly, the same courses are delivered on multiple campuses. In some cases, all deliveries are given by the same group of academics who travel or deliver online. In most cases, staff located at each campus deliver the courses on their campus. Often, but not always, one academic will have an oversight role to ensure the equivalence of the deliveries. Beyond individual courses, collaboration is required on subject area and programme levels. In many cases, one subject area is represented on multiple campuses. Often, there is an imbalance in the number of academics of an organisational unit per campus. This was mostly, but not only, pointed out by participants located in the smaller sub-groupings of an organisational unit. Also, as the strategic directions on each campus differ, there can be a difference in support for the subject areas and programmes. There are historical differences across the campuses, looking at how long a group has

been in existence, who has developed the material and who traditionally had the ownership of the courses and programmes. Each campus has its own development focus and as a consequence, it happens that subject areas find themselves in different organisational units across campuses. There are differences in how well units and individuals manage to share and work together, with some groups experiencing difficulties, yet others finding collaboration easy. Participants P20 and P18 described the respective experiences.

> P20: Some people have a different sense of ownership of the courses they've developed than others and if this can be problematic, for example with questions about equivalence.

> P18: We're really good at sharing content so and that's across campus and across within our small group content is easily shared and isn't proprietorial.

The multi-campus nature of the University seems to have a strong impact on teaching and on teaching groups. This was felt especially strongly by academics in the smaller sub-groupings. This finding suggests that questions on the distribution of teaching groups across campuses should be included in the survey.

As indicated by the numbers in Table 4.1, a lot of teaching takes place in multi-disciplinary contexts and is delivered by academics from multiple units. Teaching across discipline boundaries requires a high level of coordination. What is taught needs to be adjusted to the requirements of the subject area that receives the teaching. Concern was raised with the situation of academics teaching topics from disciplines they are not specialists in. Challenges arise from the cultural differences between the disciplines, affecting both the communication between staff and how the students perceive a course. Bridging the differences between disciplines seems to be not always successful. While certainly interesting, these issues have not been followed up in this research.

4.1.3 Summary

The discussions with focus group participants have led to a modified version of the teaching group definition that was originally proposed by the researcher (see Figure 3.2 for this new version). Using this modified definition, the qualitative findings clearly show that the academics involved in the study can relate and

belong to teaching groups. In terms of organisational structure and teaching focus, a number of different combinations were found in the teaching groups named by the focus group participants. With the largest teaching group named having a size of up to twenty members and the average being about eleven, it seems that teaching groups have the right size to facilitate effective communication and collaboration.

These findings can be taken forward into the quantitative research phase as follows. Because the qualitative results clearly show that academics belong to teaching groups a corresponding hypothesis is put forward, to be tested with the survey.

Hypothesis 1 — Teaching group membership

- The majority of academics belong to at least one teaching group

With regard to the teaching group parameters, it seems that the number of teaching groups explored is not large enough to formulate hypotheses. Instead, goals are formulated to direct the quantitative research phase towards the collection of data to test indications derived from the qualitative phase.

Goal 1 — Teaching group parameters

- Find out how many teaching groups academics belong to
- Find out how many members teaching groups have
- Find out if teaching groups are split over multiple campuses
- Find out where teaching groups are located in terms of organisational structure and teaching focus

4.2 What Happens in Teaching Groups?

This section outlines the qualitative findings relating to the research question on what is happening in teaching groups. These findings are grouped into the interactions in teaching groups, the atmosphere in teaching groups and the learning about teaching taking place in teaching groups. Aspects relating to what is happening in teaching groups for following up in the quantitative research phase are identified.

4.2.1 Interactions in Teaching Groups

Interactions in teaching groups are based both on scheduling and chance. About half of the participants explicitly reported that their teaching groups have regular, scheduled meetings. The frequency of these meetings ranges from weekly meetings during semester time, to monthly meetings or meetings that occur only a few times per year. About a third of participants described having unscheduled, informal interactions with other members of their teaching groups relating to teaching. These interactions occur by chance, at lunchtime, over coffee, in corridors or in shared workspaces. One the other hand, two participants explicitly stated that hardly any informal conversations about teaching take place in their teaching groups. The following quotes represent the opposite ends of the spectrum of statements on informal conversations.

> P27: I think there is a lot of discussion in the corridors and the coffee room and so informal, there is a lot of informal discussion.

> P6: I very rarely hear [colleagues] talk about teaching.

Some of the interaction in teaching groups occurs in face-to-face encounters. At other times, interaction is facilitated via electronic means of communication. Combinations of face-to-face and electronic communication are also common. This mixture of communication modes blurs the lines between formal and informal interactions and makes it more challenging to assess the level of interactions. For example, it is difficult to see how a face-to-face group meeting of a certain length might compare against an email exchange among group members.

The content of interactions about teaching seems to be dominated by three topics. Nearly half of the participants reported on discussing organisational issues around teaching, little over one-third of participants reported on talking about ways to improve teaching, and close to one-third mentioned that problems arising with teaching, for example related to feedback from students, are being discussed in their groups. Yet, there were also four participants who explicitly stated that there are only very limited discussions on the quality of teaching or on pathways to improvements in teaching in their groups.

There are teaching groups in which the focus of conversations is strongly on administrative matters. Participants mentioned that research issues are taking precedence over teaching matters in terms of professional development within

their groups. On the other hand, a number of teaching groups actively exchange ideas for teaching and seek input from each other. These groups address questions on how to teach and review the outcomes of approaches. Members work closely together in these teaching groups. The following two quotes are, respectively, representative for teaching groups with strong and limited interactions on improvements around teaching.

> P26: The group will get together and review their teaching and, you know, discuss how they would wish to change it.

> P19: There has been no conversation that I can recall that focused on the quality of teaching practice.

Some examples came up in the course of the focus group discussions that illustrate the differences across the teaching groups. In some groups colleagues are explicitly invited to observe teaching and give feedback. Yet, in other groups, such practice is unheard of. Some participants expressed that they would welcome interactions like peer observation, but emphasised that this had to occur in an atmosphere of positive and constructive interaction, something their current environments seem to be lacking. Some groups go as far as discussing the performance of teaching staff, for example, in response to student evaluations of teaching. Yet, in other groups, such conversations about evaluation results, which relate to individual academics, do not take place, as the following quote shows.

> P5: As far as informally chatting with people about my [student evaluation of teaching] results or their's – I don't think [so].

Participants offered some insights into reasons for the levels and types of interactions in their teaching groups. Some participants described the history of their subject disciplines as one of working closely together. Team-teaching, with several academics presenting classes together or just being in the same classroom, for example in contact courses, were described as facilitating close co-operation of teaching group members. A few participants reported on having teaching award winners in their groups. The participants said that the specialist knowledge of these individuals helps to take their groups further. Interactions about teaching are often triggered by specific events or tasks. Examples are the development of new courses, success around gaining funding for research on learning and teaching, or staff development events that are based on demonstrating examples from

teaching or on reporting back from conferences. One frequently mentioned trigger for interaction was the introduction of the University's new e-learning management system. The following quote is from a participant who described compulsory training sessions for their group. Working with the new system led to gaining access to the teaching materials of colleagues to a degree not previously seen and triggered a wealth of discussions on how to best prepare material and use the system to support teaching.

> P27: We all had to go onto [the University's main e-learning system], whether we wanted to or not, at the same time. So we were put in a room with screens and streams and we had to go for it.

One aim of the research was to find out if the majority of teaching group members are substantially involved in interactions about teaching. Just over one-third of participants made clear statements in this regard. Eight participants expressed that the majority of members of their teaching groups usually participates in group interactions, while four participants stated that only a small subset of their teaching group members shows interest in learning about teaching and sharing about teaching within the groups. The quote from participant P25 indicates why it is not possible to derive 'yes' or 'no' statements for many of the participants. Judgement is required on the level of interaction that is necessary to account for participation. The quote alerts to groups within groups and also to assigning different levels of importance to group members, which in turn might influence how their participation is seen.

> P25: Well, I mean the ones that come all the time, there is a core group we happen to have our offices next to each other which makes it easy as you do and so we would participate pretty much, the other people less so. But they're less integral too.

4.2.2 Atmosphere in Teaching Groups

The atmosphere in a teaching group is an important contributor to the way members interact. Social interaction and elements of friendship are positive facilitators for communication. Participants have expressed how important it is to get to know their colleagues as people, beyond the immediate job requirements. Closer personal connections help with team building and a strong team environment is in turn important for developing a sense of community and identity. A

mutually caring atmosphere makes it easier to bring up problems in teaching and to seek input from others. Such atmosphere nurtures the trust in colleagues that is required to open up about problems. Informal conversations, as they develop in a positive atmosphere, present a better environment for talking about problematic issues in a non-threatening way. In teaching groups that have not developed an atmosphere of friendship and trust, well-intended initiatives, that could be helpful for the development of teaching, face the danger of being seen as punitive. Where there is no trust, initiatives can be seen as threats. The perception then is that measures are only taken in response to problems with teaching. This makes the individuals concerned defensive and can prevent constructive exchange. Participant P7 expresses how a supportive team environment can help through difficult phases. The statement by participant P28 indicates how informal conversation, as they are more likely to develop in a positive atmosphere, facilitate non-threatening resolution of issues. In contrast, participant P22 describes, how a potentially useful initiative, like peer observation of teaching, introduced in an atmosphere lacking mutual caring and trust, had failed to reach its potential.

> P7: Being a team is actually, you know, feeling like you're all working together in the same direction and you can call on the other members, you know, if you're feeling low.

> P28: Yeah, I think that informal talk is often how things happen over the corridor or over a cup of tea. If you are summoned to some sort of a formal meeting then even probably the best of teachers would feel reasonably, oh dear, so you think I don't teach very well. That wouldn't be very comfortable.

> P22: [Peer observations of teaching] sort of ran into difficulties from the point of view of teachers feeling threatened. It became sort of punitive from the fact that people felt when something went wrong that's when suddenly that teacher had to go and watch somebody else or had to have someone in their room.

Several participants expressed that they find it difficult to approach colleagues with criticism on their teaching. They fear that such criticism will not be appreciated and do not know how to approach the subject. More likely than not, this leads to avoiding such difficult conversations and means that opportunities

for improvement are lost. Personalities and attitudes of individuals influence interactions on issues about teaching. Some have a keen interest to interact and exchange with others, some do not. Difficulties in getting some academics to open up and engage in exchanges results not only in a failure to address poor teaching, but also means missed opportunities, as colleagues do not get the chance to learn from these academics. Having an atmosphere in a group that allows for constructive criticism would be desirable. As expressed by participant P11, this is seen as a two-way interaction, with both sides providing and receiving constructive criticism. The quote by participant P13 provides an example of the frustration experienced by a group of academics, who could clearly see the weakness in the teaching of their colleague, but could not see how to approach the individual concerned with constructive suggestions. Participants expressed how difficult it is to encourage interaction and feel safe in doing so.

> P11: It would be really nice to be, to have an environment where to perhaps criticise each others teaching, it was not seen as being a real invasion of academic privilege and freedom.

> P13: [On group teaching] And then up came one staff member and she started and the whole room just went bbzzzz. And to the rest of us it was obvious but for her it wasn't. And what do you do there? How do you tell this person?

Participants created links between the atmosphere in teaching groups to current university culture. It was observed how there is less and less time for social interactions. Participants looked back to a time when academics met regularly over morning and afternoon teas. This time spent together in a semi-social setting encouraged a sense of collegiality and enabled the sharing of problems. Such opportunities for sharing are disappearing more and more. A few participants reported on regularly spending time with their colleagues, for example, over lunch. Yet, more focus group participants seemed to be of the opinion that academics spent less and less time together. Another point brought forward was about the lack of structure provided by the University to facilitate exchange about teaching. It seems that the level of exchange largely depends on initiative and personalities of the academics involved. Participant P15 described an example relating to the need of interaction among course coordinators across discipline areas. While instances of effective communication across course or campus boundaries were

described by participants, frustrations were also vented were individuals do not communicate sufficiently and it becomes difficult to work across boundaries.

> P15: That was very much personality driven [...] there is nothing structural in place to actually do that, it really depends on the people who want to and feel a need.

It transpired from the focus group data that the teaching groups of five participants have very high levels of interaction and cooperation, with a strong atmosphere of trust and openness. The enthusiasm expressed by these participants, when speaking about interactions within their groups, strongly suggested that such atmosphere is positive for the individuals and the teaching of the group. Several other participants reported on positive aspects of the atmospheres in their groups, yet without reaching the same level of satisfaction. Other participants, who did not seem to have experienced positive atmospheres in their own teaching groups, drew on outside experiences of the positive effects of working closely together. The term *team* was used to describe a group of individuals who work closely and constructively together. The quote by participant P24 expresses the belief in teams. Participant P13 emphasised how important it is that every member of a group pulls into the same direction.

> P24: I believe that a team, this aggregation that the outcome is greater than the sum of the bits and that is because of interactions [...] I really believe in teams.

> P13: But that's the feeling that I get. It's like we're all trying for something, we're all trying and there is someone who doesn't care, that's the feeling I get, it's like 'oh'.

4.2.3 Learning about Teaching in Teaching Groups

Participants who are members of teaching groups in which close collaboration occurs, spoke strongly about the benefits for teaching and learning about teaching. Members of teaching groups with little interaction were in some cases able to recall positive interactions with individuals from outside their groups, but otherwise could not report much on learning from within their groups. The main areas discussed related to observations of teaching and to sharing of teaching material.

Participants talked about observations of teaching in two contexts. First, opportunities to observe the teaching of colleagues can occur naturally. Examples given were from disciplines like the arts, where the presence of multiple teachers in one room seems common, or based on circumstances, such as arise when academics have travelled to a teaching location and spent time in the teaching space due to not having an office available. Second, participants reported on initiatives that deliberately place an observer into a teaching space. Both circumstances provide opportunity for learning from others. As participant P1 states, it is useful to be able to observe others to gain new ideas that then can be adapted in one's own teaching. Participant P12 describes the benefits from a deliberate observation and feedback process, conducted by a more experienced colleague.

> P1: And being in the classroom with other people I find, other lecturers, is just fantastic, picking up ideas.

> P12: When I first came to [campus] one of the lecturers did it, she came and sat in one of my tutorials and wrote a report and it was fantastic, it was so valuable.

Participants also described that the benefits of observation can go both ways. While it is not surprising that the less experienced colleague can benefit from their more experienced counterpart, the questions and viewpoints of a novice can also help the experienced teacher to gain new insights and look at their teaching in a fresh light. Several participants alerted to the dangers of having observations of teaching linked to line management, as then issues such as striving for promotion might overshadow the focus on pedagogical improvements. Opportunities arising from new technologies were mentioned. For example, where lecture recordings are taken, observations of teaching can occur based on watching the recordings. This provides more flexibility in timing the observations and might also be less obtrusive. Participants also discussed that in some contexts lectures have lost their central place in teaching, for example, where courses are delivered over distance. In these contexts, 'observations' of teaching need to take different forms, such as given via the sharing of teaching material.

Having access to each other's teaching material was largely discussed in the context of moving to the University's new electronic teaching and learning system. Participants described how working with the system has increased the level of access to the material of colleagues and has helped to increase the understanding

of what and how others teach. While academics could have shared material previously, the way the system was setup made sharing the default. Participant P4 describes how even temporary access to the teaching material of colleagues facilitated understanding.

> P4: Once everybody was happy with it, they now understood what each other was doing and had each others ideas, you just closed off access again. And that worked really well as an education forum for everybody.

Participants provided further reasons why it would be beneficial to have access to the teaching material of colleagues. They stated that academics are competitive and are driven by peer pressure. Seeing the material of others, and having one's own material looked at, encourages striving for the best. Participant P28 described how less motivated members of a group were being pulled along by the more active members of the group, with the group dynamic having positive effects on the overall outcome. It was also pointed out that there a differences between the characteristics of individuals in subject areas, with some being typically more cooperative and others more competitive.

> P28: [There were] a couple of people who were really into it and who drove a programme to go into it, which then dragged a whole lot of unwilling people into it, you know that sort of domino effect.

Typically in each focus group session, there were participants who could report on experiences of learning from each other about teaching in their teaching groups, but also others who had little or no such experiences. After largely listening to the discussions, these other participants were asked if they could see potential in learning about teaching from interactions with colleagues in their teaching groups. Statements by participants P16 and P29 provide examples of the responses given that support the potential of both sharing of material and observation of lectures.

> P16: There is a huge amount if we could just engage and learn a lot more from each other.

> P29: I'd love to sit in on other people's lectures and find out more about what they do and learn more myself so I can add more to my lectures.

An interesting observation was made by participant P19, describing how they first would like to analyse their own teaching before sharing with others. Together with comments by other participants, who had described initiatives where peer-observations of teaching were imposed, leading to poor outcomes, this might indicate that interactions need to be carefully prepared, with individuals reaching a certain level of readiness and understanding of their own teaching first.

> P19: I would find it interesting, I have never done it, but I think it would be interesting to put down my teaching philosophy, my approach to teaching and what assessments I use and why. But once I did that I'd also would like to share it with the other people in my teaching group and to see what they've had to say and to compare and contrast and learn from that process.

While the conversations in the focus groups concentrated on experiences within the participants' teaching groups, comments were also made relating to learning from others in the wider academic environment. Participants value the input from others outside their own disciplines. Getting together with others who are equally motivated and knowledgeable, as it would be for example the case with teaching award winners, is clearly seen as beneficial. In addition to learning from colleagues, the role of the academic development unit of the University was also mentioned. Some participants appreciate being able to take courses offered by this unit. It was acknowledged that members of academic development units have knowledge that can help academics to make connections between teaching in their subject areas and teaching approaches. A service offered by the academic development unit that assists with soliciting student feedback and helping academics to analyse and improve their teaching was appreciated. Others saw more potential for the services an academic development unit could offer, for example in looking at 'tips and tricks of teaching' sessions. What was seen as important is to provide support tailored to the needs of a target group of academics. Presentations from a theoretical, educational perspective might not be taken up well by academics from non-education subject areas. More practical-minded presentations, tailored to the needs of specific subject areas, were asked for.

While there was overwhelming focus on the positive aspects of interactions in teaching groups, points of caution were raised. Too much interaction can become time-consuming and there is the potential of individuals stepping over boundaries, violating the desire for privacy felt by others. Interaction, taken too far and into

a wrong direction, can slide into control, especially if hierarchies within a group are involved. This can have a stifling effect on others, who might regard this as too much interference with their teaching. While these points were only reported by two participants, it seems prudent to consider potential negative effects of interactions in subsequent investigations.

4.2.4 Summary

This section has focused on reporting on the interactions taking place in teaching groups, on the atmosphere in teaching groups, and on learning about teaching in teaching groups. In terms of interactions within teaching groups, the results from the focus group research show a wide spectrum. On the one side there are groups in which interaction is limited to administrative matters, talked about at scheduled meetings only. On the other side, there are groups that discuss teaching deeply, with members having frequent informal conversations in addition to scheduled meetings. A task for the quantitative research phase will be to establish what interactions take place in the teaching groups of survey participants, and looking at how these teaching groups will be distributed across the spectrum. As alerted to in the findings about interactions in teaching groups, it was difficult to find out to which degree the members of a teaching group are engaged. This gave rise to the idea of enquiring about who is initiating interactions, which might help to distinguish from more passive participation. These considerations led to specifying Goal 2.

Goal 2 — Interaction in teaching groups

- Find out how frequent participation in meetings about teaching is
- Find out if chance interactions are frequent
- Find out if most members initiate interactions about teaching
- Find out if most members participate in interactions about teaching

With regard to atmosphere in teaching groups, the open and trusting nature of some groups stood out in the findings and clearly seems to contribute to valuable exchanges about teaching. Again, it will be important to establish in the survey if such positive atmosphere is prevalent among teaching groups. It will also be

relevant to ask how important such an atmosphere is seen in general, beyond the boundaries of teaching groups. This leads to Goal 3 and Hypothesis 2.

Goal 3 — Atmosphere in teaching groups

- Find out if teaching groups have an open and trusting atmosphere

Hypothesis 2 — Importance of atmosphere

- The majority of academics say that an open and trusting atmosphere facilitates constructive interaction on teaching
- The majority of academics regards an open and trusting atmosphere as necessary for constructive interaction on teaching

Many participants spoke strongly about positive experiences with learning from others in their teaching groups. On the other hand, many participants could not contribute to this conversation when restricted to experiences within their teaching groups. For this research, two aspects are important. First, it needs to be established what the characteristics of a teaching group are that enable positive experiences with learning from others in the teaching group. This will be addressed in Section 4.3 that deals with the characteristics of teaching groups based on the focus group data. Second, it needs to be established if positive experiences with learning from others are prevalent among academics when looking beyond teaching groups as defined for this research. This second aspect can be addressed in the quantitative research phase, which also will look at potential negative experiences. As the positive experiences have been reported so strongly in the focus groups, a hypothesis is formulated. As only some negative experiences were mentioned, a goal is stated.

Hypothesis 3 — Learning from others

- The majority of academics have experienced interactions with colleagues that have had positive impact on their teaching

Goal 4 — Learning from others

- Find out if academics have experienced interactions with colleagues that have had negative impact on their teaching

4.3 How Can Teaching Groups be Characterised?

The overall target of this research is to find out if teaching groups could be a mechanism for facilitating learning about teaching, and by doing so, have a positive effect on teaching and ultimately student learning. To work towards this target, this section characterises teaching groups to establish which types of teaching groups are more favourable for facilitating learning about teaching. The section also looks back at the analysis of the structural characteristics of teaching groups undertaken in Section 4.1.1 and creates links with the teaching group types presented in the current section.

4.3.1 Teaching Group Types

While conducting the focus groups and analysing the transcripts, three types of teaching groups seemed to emerge.

- **Tight-knit groups**: Groups with a highly collegial atmosphere, whose members interact frequently on a variety of issues around teaching, inclusive of pedagogy;
- **Functioning groups**: Groups that have put structures in place that get members together for scheduled interaction on teaching, focusing mainly on organisational teaching matters and attempting some shared learning or problem solving;
- **Individualistic groups**: Groups whose members largely work as individuals, where interaction on teaching is prompted by problems, where little passion is shown for teaching.

Two approaches were followed to establish if these teaching group types could be substantiated and the teaching groups of participants be associated with these types. The first approach was holistic and involved focusing on the contributions of each participant in turn. The second approach was based on the definition of key factors, which are introduced in this section. Values were extracted for the teaching groups of the participants for each key factor and associations with the teaching group types made.

For the holistic approach, each focus group transcript was reread in one piece, focusing specifically on one participant at a time. From the impressions gained, the participant's teaching group was associated with a particular teaching group type. As some participants identified themselves as belonging to two teaching groups, this could link a participant to more than one group type. For most participants, the association could be determined with high confidence. For some participants, the association was less certain, which was indicated with a lower confidence value. In cases where not enough information on the teaching group of the participant was available, no association was made. Appendix K shows the mapping of participants' teaching groups to teaching group types.

The mapping resulted in an even number of tight-knit and individualistic teaching groups (10 each) and found a small number of functioning teaching groups (4). The pressures on academics to conduct both teaching and research have come out strongly in all focus groups. It is, therefore, to be expected that a teaching group whose members do not undertake research can focus more fully on teaching and that this will have an influence on their type of teaching group. If the teaching-only teaching groups are excluded from the comparison, the balance of teaching groups changes to ten individualistic, seven tight-knit and four functioning teaching groups.

Using the holistic approach, the teaching groups of the majority of participants could be associated with teaching group types with high confidence. This indicates that the types identified are a good starting point for the classification of teaching groups.

The definition of key factors for the classification of teaching groups into teaching group types focused mainly on internal characteristics of teaching groups. Outside influences and generic university characteristics, affecting more or less all academics and teaching groups, are looked at in detail in Section 4.4. The following key factors for classification of teaching groups were identified based on the focus group data:

- **Initiation of interaction:** Part of the interaction in teaching groups happens in form of organised meetings that address the whole group or subgroups. These meeting are called for by a group leader or someone leading a specific initiative. This is complemented by interactions initiated by individual group members, who deliberately interact with other group members, in form of organised meetings or via change interactions.

- **Participation in interaction:** This is about how many of the members of a teaching group commonly participate in interactions organised for the group. In some groups, the majority of members participate, in others, participation is limited to small sub-groups, composed of again and again the same academics. Participation also relates to being part of chance interactions.

- **Reasons for interaction:** The need to organise teaching is a common reason for interaction. This includes deciding who teaches which course or component of a course, which topics are covered in which sequence, how contact hours are used, how internal and end-of-semester assessment are distributed, how equivalence is achieved or how a new e-learning system is to be used. A further reason for interaction is in reaction to problems, maybe caused by complaints or indicated by negative feedback as part of teaching evaluations. A third reason lies in striving for improvements. Examples for this are interactions to evaluate the effectiveness of aspects of teaching, to discuss how to best teach a concept or cohort, to work out how to engage students, or to reflect on teaching.

- **Atmosphere within group:** Some teaching groups have a trusting and open atmosphere. In these groups members feel safe to talk about problems and less positive experiences with their teaching. They feel comfortable to seek advice. They also know that they can raise teaching issues and will find willing partners to explore such issues. Other groups have a reserved and protective atmosphere. In these groups members are reluctant to admit having a problem around teaching. Teaching is regarded as something private between academic and students, with colleagues having little to no insight. Suggestions of interactions about teaching carry the risk of been seen as accusations indicating problems.

- **Perception of importance of teaching:** In some groups, teaching is seen as a second class activity that has lower value than research. Performance in research is regarded more important than performance in teaching. If teaching is done to a satisfactory standard, possibly measured by the lack of complaints, then this is sufficient and no more energy needs to be invested. In other groups, academics see an intrinsic value in teaching which motivates

them to strife for ongoing improvements and to deliver the best possible teaching for students.

These key factors can be related to the three teaching group types. The impression from the focus group conversations was that all teaching groups fulfill their teaching obligations and therefore all teaching groups conduct organised interactions to sort out organisational teaching issues and address problems. In individualistic teaching groups there is little interaction initiated by individuals. As teaching is seen as a second class activity with little intrinsic value, interaction is responsive to problems and hardly initiated to strive for improvements. The reserved and protective atmosphere makes chance interactions about teaching unlikely.

In functioning teaching groups the majority of members will participate in organised interaction. There is some striving for improvement, largely as part of organised interactions, sometimes within sub-groups and initiated by subgroup leaders. While research might still be seen as the more valuable activity, effort is being put into teaching.

In tight-knit teaching groups there is a strong drive to improve teaching. This both stems from and is nurtured by the intrinsic value of teaching and the familiar atmosphere within the group. Members trust each other and can share problems and issues openly. Interaction is organised if required, but in addition, there is frequent chance interaction. All members contribute most of the time.

To complete the second approach for identifying teaching group types for the teaching groups of participants, all focus group data were re-read with the aim of finding values for the key factors. This was only done for the focus group participants for whom teaching group types could be defined in the first holistic approach. Insufficient information was available for the other participants.

Choosing one participant as an example, Table 4.2 shows the values identified for the key factors for the teaching group of participant P1. The table also provides quotes from the participant to help justify the values chosen. Determining the values for the parameters was challenging in places and required several judgement calls. As the key factors had been developed in response to the analysis of the focus group data, the participants could not have been asked directly about these factors. It was hard to decide to which degree something happens or applies. This resulted in largely using ‘Yes’ instead of indicating degrees of agreement. At times, it was difficult to distinguish if participants just

talked about themselves or about the members of their group. Further, participants made statements referring to the wider situation at the University or in academia, without necessarily clarifying the situation within their group. Only in a few case there were clear negative statements that suggested a 'No' response. As not every focus group participant did address every issue, there are a number of gaps in the values for the parameters. For some academics it was difficult to talk about the types of interactions within their groups or the atmosphere in which these interactions are carried out, as little interaction takes place.

Table 4.2: Values for key factors for the teaching group of focus group participant P1

Key factor	**Parameters**	**Values**	**Quotes**
Initiation of interaction	Organised interaction Self-initiated interaction By chance interaction	Yes Yes Yes	all of us are constantly sort of having conversations and working quite closely as a group we have regular conversations about not just what we're teaching but also how we go about teaching it we are getting a lot of feedback through formal and informal evaluation it certainly encourages me to be much more aware of what I do in terms of my teaching knowing that the other people in the programme are also keen and enthusiastic and committed to the teaching side as well
Participation in interaction	Selected few only Majority	– Yes	
Reasons for interaction	Organising teaching Reaction to problems Striving for improvements	Yes Yes Yes	
Atmosphere within group	Trusting and open Reserved and protective	Yes –	
Perception of importance of teaching	Second class activity Intrinsic value	– Yes	

The next challenge was to map the key factor values identified for the teaching groups against the three teaching group types. Questions posed themselves, such as how many values have to agree, how exact this agreement has to be, how much power lies in a disagreement, how much weight does each parameter carry, and how to deal with missing values. The mapping arrived at teaching group types that present general agreement with the teaching group types determined in the holistic approach. While there are many gaps for values, there are no contradictory data. It is, therefore, suggested that the two approaches of arriving at the classification of teaching groups into types are compatible and that the

teaching group types and the key factors suggested are suitable starting points for further investigations.

4.3.2 Mapping of Teaching Group Types to Structural Teaching Group Characteristics

Table 4.1, presented earlier, shows the number of teaching groups in relation to the structures of organisational units and teaching foci. Based on the mapping of participants' teaching groups to teaching group types, presented in the previous section, Table 4.3 shows how teaching group types relate to structural teaching group characteristics. Looking at these data from the qualitative research, no clear patterns emerge. With its larger participant numbers, the quantitative research phase should check for such patterns. If patterns were found, it might be possible to make recommendations about the structuring of academic units in facilitation of teaching.

4.3.3 Desirability of Teaching Group Types

In Section 4.3.1 the key factors for the categorisation of teaching groups into types were developed and the types of the teaching groups of the focus group participants were determined. This section focuses on making a recommendation on what type of teaching group is more desirable than the others in light of learning about teaching and teaching that facilitates student learning.

The parameters developed for the teaching group types focus heavily on the interaction between teaching group members. They look at forms of interactions, content of interaction and atmosphere around interactions. Section 4.2 has detailed the findings on interactions in teaching groups, on the atmosphere in teaching groups and on the potential of learning from others. This section briefly reviews these findings and looks at statements about teaching quality before drawing conclusions with regard to the desirability of teaching group types.

The focus group participants were very clear about the benefits of interacting with colleagues for receiving feedback, gaining new ideas for teaching and lifting motivation for teaching. There was strong support from the focus group participants for the potential of improving teaching by interaction with each other, in teaching groups and through contact with others. One participant expressed

Table 4.3: Mapping of teaching group types to structural teaching group characteristics

	Specific paper	**Single subject area**	**One degree / specialisation within degree**	**Multiple subject areas / degrees**
One unit, single subject area	T: 2 (2) F: 0 I: 0 N: 1 (1)	T: 4 (1) F: 2 I: 5 N: 1		T: 1 F: 0 I: 0 N: 0
One unit, multi-disciplinary focus			T: 1 F: 0 I: 4 N: 1	T: 1 F: 0 I: 0 N: 0
Multiple units	T: 0 F: 1 I: 0 N: 1	T: 0 F: 0 I: 2 N: 1	T: 1 F: 0 I: 1 N: 1	T: 0 F: 1 I: 0 N: 1

The values in brackets indicate how many of teaching groups listed are teaching-only groups, i.e., groups whose members are not concerned with research.
The following abbreviations are used: T - Tight-knit teaching group; F - Functioning teaching group; I - Individualistic teaching group; N - not enough information available.

this by describing how much more can be achieved when supported by a team compared to working alone.

> P7: You can continually just challenge yourself, but you, but when you've got a team to discuss it with you can go, oh yeah, I could do it that way, that would be really cool. So yes, it's really important to do team stuff I think.

Focus group participants whose teaching groups had collegial, open and trusting atmospheres reported on far more interactions with colleagues than focus group participants whose groups had distant and impersonal relationships. There are more interactions and these interactions are more meaningful, able to address issues and problems in non-threatening, constructive ways. In addition, members of those groups receive more support from their colleagues, allowing them

to overcome difficult situations and pressures of the academic environment more easily.

Looking at the quality of teaching in the teaching groups of participants, the following themes emerged: judging the quality, discipline and student factors influencing quality, academic-internal drivers for good quality teaching, measurements of quality, head of units not knowing quality of teaching, implications of poor quality, and the taboo of talking about poor quality. Several participants made direct statements about the quality of teaching in their teaching groups. Table 4.4 contains direct quotes of participants in regard to this quality. This shows that participants judged the quality from being quite good to of below passing standard. Some participants see wide variability across the members of their teaching groups.

Table 4.4: Participants' judgements of teaching quality in their teaching groups

We do a pretty good job
I'd give us a C as a group
If you average out between the D and the A you get a C
As a group around the C
Basically is variable I think and the people who stick around are generally very good
Generally it's pretty good
Pretty good
Really good
It varies

Some participants, like participant P29, stated that they were not able to comment on the quality of teaching of their colleagues. One reason for this lies in the privacy of teaching. In many cases teaching is private between students and their teacher, with colleagues not being able to observe or participate.

P29: I don't know because I don't see it.

Overall, participants agreed that it is difficult to assess the quality of teaching. The most important sources of information seem to be the outcomes of student evaluations of teaching. These are complemented by feedback from students gained through other mechanisms, direct observations, and, to a limited degree,

student grades. Yet, even with access to information it is difficult to assess the quality of teaching. Participants discussed the influence of student and degree contexts on teaching success. As an example, they referred to service teaching where degree requirements, like in the sciences, force students to take courses in communication. Often this results in reluctant students who might not be very receptive to the efforts of even the best teachers.

These considerations show two important findings. First, academics report clear benefits for themselves and their teaching from interactions with their colleagues around teaching. Second, a collegial, open and trusting atmosphere in a teaching group encourages meaningful interactions and provides support to academics. Based on these findings, the higher value of tight-knit as compared to functional or individualistic teaching groups can be established and is depicted in Figure 4.1.

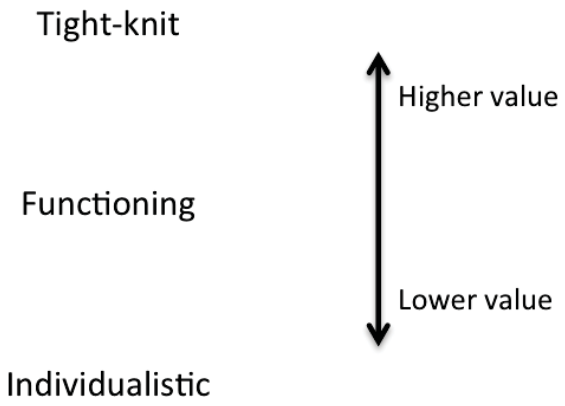

Figure 4.1: Relative value of teaching group types for teaching and learning about teaching

4.3.4 Summary

Analysis of the focus group data has suggested that there are three types of teaching groups. In a first approach, the contributions of each participant were looked at holistically to associate their teaching groups with a teaching group type. Then, key factors for teaching groups were derived by studying the focus

group data of all participants. These key factors were associated with the teaching group types. In a second approach, values for the key factors were determined for the teaching groups discussed. Both approaches arrived at compatible classifications of teaching groups into teaching group types. This is important looking forward to the quantitative research phase. In the survey, specific questions that produce quantifiable answers will have to be put to participants. Questions derived from the key factors will enable this. Goal 5 captures the desire to measure the teaching group types of survey participants.

Goal 5 — Determining teaching group types

- Find out the types of the teaching groups in the survey

The numbers of teaching groups discussed in the qualitative research phase were not large enough to determine potential relationships between teaching group types and structural characteristics of teaching groups. The quantitative research phase can look at this again, resulting in Goal 6.

Goal 6 — Relating teaching group types to structural characteristics

- Find out what relationships exist between teaching group types and organisational structure and teaching focus of teaching groups

The participants have clearly stated the value of interactions with colleagues. They were also very clear on the impact of a collegial atmosphere on facilitating such interaction. Based on the analysis of the focus group data, there are strong indications that tight-knit teaching groups are best in supporting learning about teaching and engagement with teaching. For the focus group data less than half of the teaching groups were classified as tight-knit. Following up on Goal 5 will provide data on the teaching group types of the survey participants. The survey will also provide the opportunity to directly ask questions on quality of teaching and quality of teaching groups. This will provide an additional way of assessing quality, independent of the quality judgements derived from the focus group data. Questions regarding teaching quality will also be asked beyond the teaching group boundaries. This leads to Goal 7 for the survey.

Goal 7 — Relating quality statements to group types and beyond

- Find out how survey participants judge the characteristics of their teaching groups with regard to facilitation of high quality teaching
- Find out how survey participants judge the quality of teaching in their teaching groups
- Find out if statements on quality made by survey participants match the ranking indicated by teaching group types
- Find out if participants think teaching quality would benefit from closer interaction of academics on teaching
- Find out if participants see a need for improvements of teaching quality at the University in general

4.4 What Outside Factors Influence Engagement?

The focus groups provided rich data on the influences on teaching, ranging from personal to institutional and sector issues. Many of the statements made by participants refer to teaching and university life in general. These issues affect teaching groups profoundly, but their origins and causes go well beyond the teaching group boundaries. This section provides a brief insight into the topics and opinions expressed.

4.4.1 Higher Education and Institutional Factors

University external factors and university structures affect how members of teaching groups work together and how teaching groups are composed. External influences, like striving for an internationally recognised accreditation, can have a strong influence on the interaction among members of teaching groups and between teaching groups. Groups that provide service teaching are under pressure from other units who are looking to teach fundamentals in areas like statistics or physics from within their disciplines. Structures within a university can put pressure on units, for example, with different foci across campuses or competition

across units for students. Restructuring of units can trigger a critical review of the course offerings and ways of teaching.

One aspect discussed among focus group participants was the consideration of research versus teaching strengths as criterion for academic appointments. Several specific points of concern were voiced by participants. In applied degrees, strong and current industry experience is crucial for teaching students up-to-date knowledge and practices. Research-focused appointees often lack this experience. In some disciplines, there are still relatively few potential candidates who carry PhD qualifications. Because of the University's demands to appoint on research qualifications, candidates can be appointed who are less suitable for teaching the qualifications a discipline offers than others who are not PhD qualified. Again, based on the need to appoint on research qualifications, difficulties arise where experience in a New Zealand context is essential for teaching. Where overseas candidates are appointed based on their superior research backgrounds, outcomes for students can suffer, as these academics are unlikely to have sufficient grounding in New Zealand systems and culture. Participant P14 speaks for a number of participants who see a focus on research strengths in university appointment processes, to the detriment of looking for teaching proficiency.

> P14: The traditional thing for university is you look for researchers, as you look for experts, and somehow magically they will know how to teach.

Financial constraints and budget cuts impact on the availability of teaching support. The tendency seems to be that staff numbers are being reduced, with effects on workloads and the ability to allocate tasks matching the strengths of staff. University workload formulas are seen as restricting the flexibility of teaching groups to arrange teaching and teaching loads to best suit their particular needs.

Following on from the New Zealand system for measuring research outputs, the University focuses on the individual academics and their research outputs. Focus group participants spoke in favour of a group-based approach, where individuals could work to their personal strengths to a greater degree. Such an approach would allow some to focus more on teaching and others more on research, with everyone being equally valued. Participant P14 describe what they see as disadvantages of the current approach taken by the University.

> P14: Unfortunately the system we've got now doesn't allow the group to set its own boundaries and to use its own strengths.

Many courses offered at the University are delivered from multiple campuses and in multiple delivery modes. The University operates an equivalence policy which means that there should be no differences in learning outcomes or assessment between these offerings. This requires a substantial amount of communication from academics involved in these courses. These academics are often located at different campuses and in some instances in different sections. As participant P12 states, communication and cooperation across campus and organisational boundaries can be challenging or even non-existent.

> P12: There are people at [campus] who do exactly the same [courses] that I wouldn't have contact with.

The multiple delivery modes and location issues can place restrictions on academics in terms of the type of support they can offer to students. Equivalence and workloads are also affected by the degree of willingness of academics to share teaching material they have developed. Units spread across campuses have found different ways to coordinating the delivery of equivalent courses and programmes. Even within the same campus, the physical closeness of offices seems to be very important for communication between academics and close physical proximity is seen as conducive to strong communication.

Participants emphasised the importance of a social environment. If colleagues come together in a social and relaxed atmosphere, opportunity exists for meaningful exchange. In the current university system, there is less and less room for social get-togethers. Informal interaction opens up the chance for bringing up problems and discussing these in a friendly and supportive atmosphere. As participant P28 describes, academics seek collegial support networks. Participants found that it is important to create opportunities for social interaction. Having a good time together is an important motivator for staff. It was described how policies of the University that, for example, restrict how money can be spent for catering, can be counter-productive, create a negative atmosphere and lessen motivation. The intrinsic motivation academics bring to their profession, can be negatively affected by narrow rules and regulations. Participant P24 expressed such sentiment.

> P28: And I want to have some sort of collegiality connection so that I know who I can go to when I need to.

> P24: If you make staff feel negative and destroy the fun and the passion then it breaks down, formal, informal, everything, and just becomes mechanistic.

4.4.2 Value of Teaching

The focus group conversations showed that academics are concerned about the value that is assigned to teaching by the University. About a quarter of the participants explicitly expressed the opinion that the University rates research over teaching. The quote of participant P17 provides an example stating such an opinion. Participants were concerned that the quality of their teaching does not matter to the University. They felt that there is little recognition of high quality teaching and the minimum level of teaching quality required was perceived as being very low. Participants talked in general about 'the University', but also about their section leaders. Head of sections are seen as paying little attention to the quality of teaching and will react only if forced to by student complaints. Participant P2 expresses the perception, shared by other participants, that the University is satisfied with moderate teaching quality and only intervenes when the standard of teaching is at a fairly low level.

> P17: In the [college name] they have pretty much been saying, look, teaching is fine, but it's your research output which counts.

> P2: As long as you do an adequate job of teaching that's fine, there is no differentiation between adequate and top, there is no differentiation whatsoever. Only if you do a bad job of teaching are there any different consequences, then action would be taken to address it.

Participants discussed what drives academic to invest themselves into teaching. Intrinsic motivation emerged as the strong force, with the vast majority of focus group participants having high levels of intrinsic motivation. Talking about the colleagues in their teaching groups, some participants, such as P2, praised the motivation of some of their colleagues to teach well. Yet, other participants were critical about the effort invested by colleagues into teaching. As the statement

by participant P3 shows, the focus on research is seen as what distracts some academics from teaching. While teaching groups were discussed in which the levels of motivation shown by group members was seen as uniformly high, this was not the case for all groups. For many teaching groups, there seem to be subsets of highly motivated academics who work together with colleagues who clearly seem to put their efforts into research instead of teaching. Participant P14 indicated how this can lead to a lack of communication within groups, which in turn is likely to have a negative effect on teaching.

> P2: We've got some people who are very interested in good quality teaching, comes more from an intrinsic point of view rather than any outside force, it's just that they take pride in good teaching and, and they make an effort to teach well.
>
> P3: For most people [teaching is] just something they have to do and once it's, you know get it over and done with, and get back to supervising PhD students and doing research.
>
> P14: When I think of people in our department who are totally research focused, they will go in, they will teach totally independent of anything else that is going on in that [course] or even on the programme.

The focus group data indicate that the focus group participants see the value of teaching in the University as problematic. The University does not seem to be successful in communicating that teaching has the same importance as research. Participants shared the opinion that promotion based mainly on teaching is difficult to achieve, especially for the higher academic ranks. There was consensus that research is more important for gaining promotion. While teaching specific awards are presented, these ultimately do not seem to count heavily for promotion. There was discussion about the possibility for academics to choose teaching only roles. This seems possible, but not at senior level appointments.

The participants discussed that it is more difficult to measure good teaching than successful research. Teaching can be better measured qualitatively, yet this seems to receive less recognition than the quantitative measures available for research. Further, the participants had different opinions on what counted in terms of demonstrating good teaching, either just the largely quantitative

measures of the University's system for student evaluation of teaching, or also qualitative reflections provided by academics about their teaching.

4.4.3 Leadership in Teaching

The participants brought forward several reasons explaining why leadership in teaching is important. If leaders do not express the importance of teaching events and interventions, academics will, in many cases, not attend or participate. Emphasis on the importance of teaching and learning, expressed by someone in power, influences the behaviour of academics. Participant P13 describes the experience in their group, where the importance of teaching was emphasised by the academic manager. On the other hand, participant P2 is part of a setting where the leaders do not emphasise the value of teaching and interaction on teaching. In this setting the academics fall back on the assumption that research is more important to fulfilling their job obligations.

> P13: It makes a huge difference when the boss [. . .] says teaching and learning is important.

> P2: I've got to do what I perceive my employer requires me to do and that's research and publications, not sharing about teaching.

Leadership can have the welcome effect of creating participation. The leader of a teaching and learning initiative does not necessarily have to be in a position of authority. Yet, it is essential that the leader is backed up by someone with authority. Leadership and directives must be real. Academics detect if there is no urgency behind a request and, as a consequence, might choose not to participate. A group environment that is focused on teaching and learning helps to get the messages issued by leaders through to more reluctant individuals. Leadership can have a detrimental effect if the leader and the group have different philosophies and do not have a trusting relationship.

It is important for leaders to listen, to recognise concerns in a group and to follow up on these. Part of the role of leaders is to create conditions that are supportive of the needs of the group. This can be to accommodate the need for both teaching and research, or to give the backing when using alternatives to established administrative procedures. Participant P1 describes how a leader in

their area has helped staff to give justice to both teaching and research requirements. As participant P6 outlines, leading by example would be welcomed and would help setting the right expectations for a group.

> P1: Our programme coordinator is very strong on finding that right balance between teaching, get the teaching really high quality but also making time for staff to carry out the research that they need to do.

> P6: Ideally I would like managers to encourage staff to actively participate and, better still, to lead by example. This will raise expectations.

In a number of groups the leadership comes from within the group. An enthusiastic group provides a positive motivation for individuals and the dynamic within a group can influence others to become more involved. Participant P11 talks about a mentoring programme run within their group that has been developed to take advantage of the knowledge and experience within the group.

> P11: We do have a mentoring sort of programme involved with new staff so that they can talk with a senior person in the group about these kinds of issues.

A further area of the need for leadership discussed were problem situations within a teaching group, for example, if one academic does not seem to carry their weight in teaching. The group members expect their leaders to resolve such issues. As participant P4 describes, there are issues individuals in the group cannot resolve among colleagues without help from their leaders. Where leadership is not happening academics feel left to their own devices.

> P4: That's really what you need a head of [unit] for is to take all those knocks, because that's that sort of protects the rest because you will also find that you, within your teaching group, can't tell anybody else what to do.

4.4.4 Discipline and Student Factors Influencing Quality

Participants discussed the influences of discipline and student factors on the quality of their teaching. In many areas, students are forced to take certain courses at the start of their degrees, for example specialised communication courses or foundation courses in statistics or physics. The compulsory nature of the courses

can have a negative impact on student motivation and willingness to study. Even the best teaching cannot compensate for the effects stemming from the compulsory nature of courses. Negative attitudes to study certain subjects and courses impact on student outcomes and student evaluations of teaching. Participant P5 describes their experiences with teaching compulsory courses.

> P5: The compulsory nature of the course, who cares if you have the most brilliant teacher on the face of the earth, students have to take it, they have to do it, they might stick with it, they might drop out, they might come back.

Not all problems stem from students' unwillingness to study a subject. Methodological differences between disciplines also cause problems and can impact on how teaching quality is perceived. Participant P7 talks about their experience with teaching students from subject areas with other philosophical foundations and the resulting problems in teaching these students.

> P7: It's not low quality, it's just not the way they're used to doing things and they find it really challenging and boring.

Another issue relates to the nature of how some courses are setup. In some areas a variety of diverse subjects are combined into one course. Because of their diversity, these subjects are taught by different academics, leading to a large number of individuals teaching relatively small portions of a course, which can lead to high fragmentation. Even if the quality of all individual teaching is high, the overall quality of the course can suffer. This is an experience participant P5 has formulated.

> P5: I think individually we're all quite passionate about what we're doing and we want to ensure high quality, but I'm afraid, there is fragmented result in the teaching which may in fact fragment the quality of the overall picture of the students.

The participants recognise that, despite best efforts, it is not fully in their power to affect student outcomes positively.

4.4.5 Need for Professional Development

Some participants expressed the opinion that academics should be required to undertake professional development in teaching, before starting to teach, and

throughout their teaching. Participant P18, for example, questioned, why academics are not required to undertake ongoing professional development, as is mandated in other professions.

> P18: But shouldn't we be mandated to, like in any profession, you have to do CPD, continuing professional development, shouldn't we as teachers be required to take courses in teaching?

Participants were not sure about the current situation at the University in regard to academics being obliged to participate in courses about teaching when commencing an appointment. Disbelief was expressed, as in the statement of participant P29, that academics do not take up development opportunities and that there are no repercussions from University management. The opinion was expressed that there should be some requirement of professional development and that some checking up on quality of teaching should happen.

> P29: A lot of staff haven't done it and they can give all sorts of excuses as to why not ... they're not getting into trouble for not doing it so it just falls between the cracks.

One participant reported on their positive experience with formal learning towards a qualification in adult learning. This was the only participant who referred to having done formal study in this area. Most experiences related to non-formal learning. The University has an academic development unit which offers a variety of courses on topics relating to teaching and learning. Individual courses are usually half-day and can be combined to a University internal staff development certificate. Traditionally, these courses have been delivered face-to-face, but in recent times online components have been added, especially in relation to the University's e-learning systems.

There was some reference to the positive effects of attending courses by the University's academic development unit, both for learning and making connections with others. Yet, there was also disapproval of the offerings of the unit. A participant criticised the way the courses are organised as half-day events and appreciates the move to electronic and more flexible delivery. Others spoke of the disconnect that occurs, if too much time passes before the material covered in the courses can be applied. A criticism voiced on organised teaching and learning events was the breadths of these offerings. A participant reported on their

own difficulties and that of others to extract information valuable to their own disciplines from the courses and events offered.

Some participants stated that they do not learn well in non-formal course settings, such as courses provided by academic development units, and prefer informal learning opportunities. Like participant P28, they emphasise the values of networking with others and asking for help on specific issues as need arises.

> P28: So I think it's that sort of the network stuff for me. It's about people telling me what others are doing and I can go and ask them for information on how to do that and people are really accommodating.

Several focus group participants have come from a teaching background to their academic positions and, for example, have teaching qualifications for the compulsory sector. Some participants have previously worked in teacher colleges or polytechnics. Some of the sections in the University, the participants are working in, used to be part of teacher colleges or polytechnics. These teaching connections have coloured the experiences of these participants. Academics from a teaching background are seen as having a higher level of teaching skills than academics from a research background. These academics also show a higher willingness to work on improving their teaching. Participants expressed appreciation for traditions, like observations of lectures, that sometimes have been carried over from more teaching focused settings into the University. While coming from a teaching background was largely seen as having positive impact on teaching at university level, caution was also voiced. There seems to be a danger that trained teachers take their skills for granted, without sufficient consideration for the contexts of university teaching and adult learning and the need for keeping step with new developments.

Participants appreciated the specialist support provided by academic developers. They acknowledged both the knowledge of these specialists and the way in which they interact with academics. Seeking feedback from academic developers can be more effective than consulting with colleagues, looking both at the specialist knowledge and at personal relationships. As participant P25 reports, there can be limitations in learning from colleagues.

> P25: [My colleagues] look at the subject matter and they can look at how they've had students respond but they don't have all that background.

4.4.6 Impact of Introducing E-Learning Systems

The questions put to participants in the focus group sessions did not target e-learning technologies or systems. Yet, in all focus group sessions participants brought up the topic and made multiple references. In most cases participants talked about the new e-learning system that had been introduced at the University over the last two years. The introduction of the new e-learning system had been strategically organised and had been supported by considerable resources. Whole programmes were moved from the old e-learning system to the new system. All staff in these programmes had to participate in this transition. Besides the migration of whole programmes, individual academics could apply to move their courses to the new system ahead of schedule.

Participants reported on mixed reactions by academics in embracing the new system. Academics need time to gain confidence with the new learning technologies. Provided with the right training, they were able to take the step. Participants also expressed the importance of keeping up with developments in information technologies, regarded as important when interacting with and educating the younger generation. Moving to the new system and related technologies provided this opportunity and was welcomed.

For many teaching groups the move to the new e-learning systems has proven to be a catalyst for engagement with teaching and exchange among colleagues. Participants, like P25, reported on how the move to the new system affects everyone and triggers exchange among colleagues. There were new opportunities for sharing and for getting an insight into the otherwise private world of teaching of individual academics. Participants, like P27, reported on learning from these opportunities. Participants recognised the opportunities for learning from each other and would like to see more widespread sharing. It was also expressed that technology, while influential, does not replace the need to engage with pedagogy.

> P25: We all have to do it, we're all trying to see other people do it, don't we, and just people talk about it.

> P27: It was fascinating to see what everybody else does.

The introduction of a new e-learning system provides an opportunity for leaders to encourage engagement with teaching. One participant reported that their teaching group leader, who does not otherwise promote engagement with learning about teaching, asked academics to engage with the new e-learning system.

Another participant reported that their head of section appointed help for staff to move to the new e-learning system. Yet, the leadership in this section seemed to not have been strong enough to achieve uptake. In some groups a dynamic evolved, with early adopters leading the way and peer pressure encouraging hesitant colleagues to engage. Groups further ahead in the adoption of the new system were leading the way and were assisting others across the University.

While most of the discussions focused on the University's new e-learning system, challenges for academics also arise from other new technologies such as video recording of lectures. Several participants talked about colleagues who have not yet mastered techniques such as presentation tools. Frustration with these colleagues, who are not moving ahead with educationally valuable adoption of technologies, was voiced by participants.

4.4.7 Personal Factors

Academics work in a challenging environment requiring contributions to teaching, research and service. The motivation to invest time and effort into teaching seems to stem from an internal desire to assist student learning and to feel proud about one's contribution. Both participants P9 and P29 acknowledge the importance of outcomes for students. Participant P9 emphasises the importance of good teaching to themselves. Participant P29 talks about their passion for their subject and their desire to pass this passion on to their students.

> P9: It's not just the outcomes for the students, but it's yourself too, it's how it makes you feel.

> P29: I like seeing my students succeed and I like giving them the passion that I have for the subject.

Inner motivation seems to outweigh demands set and rewards given by the University. External motivation to satisfy the demands of the University as an employer with regard to teaching was mentioned, yet at the same time, this was qualified as being a very low bar that was easily achieved. Disappointment was expressed that this inner drive to do as best as possible in teaching is not shared by all, as the quote by participant P6 shows.

> P6: The call of why we're here is to totally be as best as we can do in our teaching and I don't see many of my colleagues actually thinking in that sense.

Participants would like to see teaching recognised as valuable part of university life. Academics should recognise their responsibility towards students. They need to make time for students, as students are at the heart of what a university is about. Academics need to remember that they are interacting with people. Teaching should not be mechanistic, but focused on the learner. A university should celebrate innovation and good practice. Learning involves risk-taking. Academics should be prepared to take such risks and model to students their own willingness to explore and to learn. Also, links between research and teaching can and should be found and emphasised. Participant P24 criticised their colleagues for not being willing to take risks inherent in driving teaching and learning forward.

> P24: I'd like to say to the students, I expect that you're learning, well we're learning too. And within sort of reasonable risk I think that's what we've got to do. Many colleagues at the moment are diving for comfort and I think I'm not very happy about that.

Participants thought that academics are willing to give and take. The opportunity to find out what colleagues are doing in their teaching would motivate academics, either to learn for their own teaching or to assist others in their development. Yet, as participant P6 stated, influencing each other is difficult without knowing where oneself or others stand.

> P6: I would actually ask about myself to say, oh, I need to either raise the bar or, hang on a minute, I need to be able to help them, but it's very difficult when you really don't know.

4.4.8 Summary

The focus group participants have brought up many factors that influence teaching and learning about teaching at universities. Several of these factors will be taken forward into the quantitative research phase for further investigation, either in teaching group contexts or by looking at teaching in more general terms. Because of the strengths of support for intrinsic motivation, a hypothesis is formulated. Various goals are presented to guide the data collection for the other factors.

Goal 8 — Value given to teaching

- Find out what value is given to teaching in teaching groups

Goal 9 — Relationship to colleagues

- Find out if participants are influenced by the teaching quality of their colleagues
- Find out if participants think they can help colleagues with learning about teaching
- Find out if participants think they can learn from colleagues about teaching

Hypothesis 4 — Motivation for teaching

- The majority of academics is driven by intrinsic motivation to put effort into teaching

Goal 10 — Motivation for teaching

- Find out if academics are driven by extrinsic motivation to put effort into teaching
- Find out what factors contribute to intrinsic or extrinsic motivation to put effort into teaching

Goal 11 — Leadership in Teaching

- Find out if academics experience effective leadership for teaching

Several factors mentioned by participants were not followed up in the survey, despite their importance. It was very clear throughout the focus group conversations that participants recognise the challenges arising from the dual responsibilities of teaching and research and that they perceive research being given the higher importance in the university system. Because of the strength of this message and its congruence with the literature, it is unlikely that the survey would provide new insights into this topic. The impact of the introduction of the new university-wide e-learning system was also reported strongly. Again, this is not investigated further in the survey. Research beyond this thesis should pick up

this issue in the context of looking at potential triggers for increasing interaction and learning in teaching groups.

4.5 Summary of Qualitative Findings

This chapter has presented the findings of the focus group research phase. The findings have been reported structured by the four main research questions investigated for this thesis. Directions for the quantitative research phase, in form of hypotheses and goals, have been developed. Table 4.5 summarises the qualitative findings and lists the related hypotheses and goals that are examined in the survey research phase.

The focus group research has found that academics who participated can relate to the concept of teaching groups. All participants could identify their teaching groups. A number of participants belong to more than one teaching group. The size of teaching groups varies, with an average size of about eleven members. The teaching groups identified were set in relation to organisational structures and teaching foci. No particular pattern emerged and a variety of constellations are present in the teaching groups of the participants.

The analysis showed that the degree of interactions among teaching group members varies. While all teaching groups discuss organisational teaching matters, the level of interaction related to *how* to teach differs. There are teaching groups that feature frequent exchanges about improving teaching, but there are also groups that limit conversations to a bare minimum. The atmosphere in the teaching groups discussed ranges from open and trusting to distant. An open and trusting atmosphere was seen as important by participants for facilitating teaching and learning about teaching. Participants reported on positive experiences with learning from colleagues and emphasised the potential of both learning from others and in turn helping others.

Based on the focus group data, three types of teaching groups were identified and named as tight-knit, functioning and individualistic teaching groups. This classification was developed by looking at the contributions of each participant in a holistic way, and also by examining factors that characterise teaching groups. It was determined that tight-knit teaching groups are better than functioning and individualist teaching groups for engagement with teaching and learning about teaching. This finding was based on the higher levels of meaningful interaction

Table 4.5: Research questions with related qualitative findings and hypotheses and goals

'Do academics belong to teaching groups?'	
Academics can relate and belong to teaching groups Teaching groups have up to 20 members and an average of about 11 members Teaching groups relate to a variety of organisational structures and teaching foci	H1 Teaching group membership G1 Teaching group parameters
'What happens in teaching groups?'	
Teaching groups show a variety of levels of interaction The atmosphere in teaching groups ranges from open and trusting to distant Academics regard an open and trusting atmosphere as important Academics have positive experiences with learning from colleagues	G2 Interaction in teaching groups G3 Atmosphere in teaching groups H2 Importance of atmosphere H3 Learning from others G4 Learning from others
'How can teaching groups be characterised?'	
Teaching groups can be placed on a scale from tight-knit to individualistic types Tight-knit teaching groups are better for engagement with teaching and learning about teaching	G5 Determining teaching group types G6 Relating teaching group types to structural characteristics G7 Relating quality statements to group types and beyond
'What factors outside teaching groups influence engagement with teaching and learning about teaching?'	
Pressures to produce research outputs impact on teaching Academics experience pressures stemming from the characteristics of today's situation in higher education The value giving to teaching by academics varies The motivation to invest effort into teaching comes largely from intrinsic values The effectiveness of leadership for teaching varies across the University	G8 Value given to teaching G9 Relationship to colleagues H4 Motivation for teaching G10 Motivation for teaching G11 Leadership for teaching

in tight-knit teaching groups and the positive impact associated with such interaction.

The discussions among focus group participants provided insight into a range of factors outside of teaching group boundaries that influence the engagement with teaching and learning about teaching. These factors relate to the situation in higher education in general, or are derived from the personal perspectives of individual academics. The focus of the university sector on research puts pressure on the attention given to teaching. The value academics put on teaching varies. The motivation to invest effort into teaching largely stems from intrinsic values. Extrinsic motivators, such as teaching awards or promotions, seem to play only a much smaller role. While positive examples were presented, participants were largely critical of the effectiveness of leadership for teaching across the University.

The next chapter focuses on the quantitative research phase. It provides the mapping of hypotheses and goals to the survey questions and presents the findings of the survey analysis.

Chapter 5

Survey Findings

In the previous chapter directions for the quantitative research phase, in the form of hypotheses and goals, have been developed. Hypotheses have been formulated where findings resulted in statements for which confirmation will be sought. Goals have been formulated where the focus group data showed responses on a wide scale of possible values. The quantitative research will establish if there are majorities for one end of the scale in the larger survey population.

It was crucial, for the survey, that the intended understanding of teaching groups was communicated clearly to participants. A challenge for the survey design was to formulate questions that target the issues important to the research clearly and avoid misunderstandings. For example, the researcher tried to establish how much exchange is going on between teaching group participants, driven by their interest to talk about teaching. Initially the terms *formal* and *informal* were used to distinguish between meetings arranged for the group and conversations between members. As discussion among focus group participants showed, these terms did not lead to the distinctions intended by the researcher, as it was not clear how, for example, a meeting with colleagues arranged by a teaching group member should be classified. These experiences were considered when designing the survey questions.

As the focus groups revealed, several participants belong to more than one teaching group. For the survey it was decided to instruct the participants to focus on one teaching group of their choice. While it would have been interesting to hear about all teaching groups a participant might belong to, it was thought that responding to the questionnaire would then take too long.

The qualitative analysis had identified the three teaching group types of *tight-knit*, *functioning* and *individualistic*. These three types were based on different levels of interaction and different manifestations of atmosphere. The tight-knit and individualistic groups represent the opposite ends of a scale. The survey analysis attempts to match participants' teaching groups to this scale.

This chapter presents the findings from the quantitative research phase. It is structured according to the research questions posed for this thesis (see Section 2.5.2) and the hypotheses and goals. For the attribution of quotes, stemming from the freeform survey questions, respondents are identified with 'R' and a sequence number.

5.1 Do Academics Belong to Teaching Groups?

Table 5.1 summarises the hypotheses and goals as they relate to the research question 'Do academics belong to teaching groups?' and provides the corresponding survey question numbers and headings. The full questions can be found in Appendix I and the detailed answers in Appendix L.

5.1.1 Teaching Group Membership

Question 1 asked participants if they can relate to the provided definition of teaching groups. 94.38% of answers were 'Yes', 5.63% 'No' (out of 320 answers). This is seen as strong confirmation of the relevance of teaching groups as a concept.

Participants who stated that they cannot relate to the teaching groups definition provided the following reasons. For some the suggested definition of teaching groups was not clear enough and participants had therefore no basis to agree. The circumstances of other participants meant that they could not relate their situation to teaching groups or could not do so currently. Some reasons provided indicated that the participants misunderstood the intended meaning of the definition, for example when stating 'I like to work independently' (R171).

Only participants who had answered that they can relate to teaching groups were presented with the next two sections of the survey. The other participants were directed immediately to the section in the survey that dealt with questions about the individual academic.

Question 2 asked how many teaching groups a participant belongs to. Of the 277 participants who answered this question 41.16% stated that they belong to

Table 5.1: Mapping of hypotheses and goals to survey questions (Part 1)

Research question 'Do academics belong to teaching groups?'	
Derived from focus groups	**Mapping to survey questions**
H1 *Teaching group membership* The majority of academics belong to at least one teaching group	Q1 I can relate the suggested understanding of 'teaching groups' to my situation.
G1 *Teaching group parameters* Find out how many teaching groups academics belong to Find out how many members teaching groups have Find out if teaching groups are split over multiple campuses Find out where teaching groups are located in terms of organisational structure and teaching focus	Q2 I belong to the following number of teaching groups.
	Q3 The following best describes the organisational structure of my teaching group.
	Q4 The following best describes the teaching focus of my teaching group.
	Q5 My teaching group has the following number of academic members.
	Q6 My teaching group has members at multiple campuses/sites.
	Q7 Compared to the other locations, on my campus/site there are ...

only one teaching group, meaning that the majority (or 58.84% of participants who provided an answer) belong to several teaching groups.

For the remaining questions relating to teaching groups the participants were asked to select one teaching group they belong to as basis for their answers. No suggestions were made to direct participants in their choice of teaching group. This means that data for only a subset of teaching groups of participants have been collected.

Question 5 asked participants to select the number of academic members in their teaching groups. The option selected most (39.78%) stated 5 or less academic members. About 75% of teaching groups have up to 10 academic members (there were 279 answers in total).

Question 6 asked if teaching groups stretch over multiple campuses or sites. The responses showed that just over half (53.43%) of teaching groups stretch over multiple locations (out of 277 answers).

Question 7 attempted to find out if the participant is located in the smaller or larger part of their teaching group. This question was intended to refer to the teaching group of the participant. Answers to Question 6 suggest that there are 148 teaching groups referred to in this survey that have members at multiple campuses or sites. The answers to Question 7 are in conflict, as there are 182 responses comparing the relative sizes of the teaching groups at the various locations. These numbers do not match up. An explanation could be that participants misunderstood Question 7 to refer to their campus or site in general instead to their teaching group. Because of this conflict, the answers considered for this question have to been limited to the answers of participants who responded with 'Yes' to Question 6, assuming that these participants would have related their answers to their teaching groups. The doubts on the validity of the answers to Question 7 must be kept in mind for the further analysis.

5.1.2 Teaching Group Structure

Questions 3 and 4 asked about the organisational structure and the teaching focus of teaching groups. The 278 answers to Question 3 show that about half the teaching groups are formed by members who are in the same organisational unit and in the same discipline (49.28%). This is followed by teaching groups with members also in the same organisational unit but from different disciplines (28.78%) and by teaching groups from different organisational units (18.35%). 3.60% of responses indicated the option 'Other'. The first and largest group can be equated with traditional departments. The second group can be compared to institutes that have been built based around research groups. The third group indicates situations where teaching stretches across institutional groupings.

The explanations provided by participants who chose 'Other' largely referred to different characteristics for several teaching groups. These participants seem to have missed the instructions to focus their answer on only one teaching group. One explanation referred to geographical locations, whereas another enquired about the term 'organisational unit'.

The answers to Question 4 (278 in total) on the focus of the teaching in the teaching group are fairly equally distributed across the options provided: teaching of one specific course (20.50%), teaching in a single subject area (25.90%), teaching into one specifc degree (26.62%), teaching into multiple subject areas or degrees (25.18%), 'Other' (3.60%). The explanations provided with the option

'Other' referred again to multiple teaching groups and to special circumstances in clinical teaching and in pre-degree programmes.

Overall the vast majority of academics could relate to the options provided for organisational unit and teaching focus. As it was done for the focus group analysis (see Table 4.1), a matrix can be constructed based on the answers to the two questions on organisational unit and teaching focus. While the largest concentration of teaching groups (52) is placed at the cross-section of one organisational unit in one discipline area with teaching into a single subject area, the teaching groups are distributed across the matrix. No strong pattern emerges (see Table 5.2).

Table 5.2: Cross-reference of answers to questions 3 and 4

Number (277 participants answered both Questions 3 and 4)	Specific course	Single subject area	One degree / specialisation within degree	Multiple subject areas / degrees	Other
One unit, single subject area	29	52	35	19	2
One unit, multi-disciplinary focus	19	12	23	26	0
Multiple units	7	6	15	21	1
Other	2	1	1	4	2

5.2 What Happens in Teaching Groups?

Table 5.3 summarises the hypotheses and goals as they relate to the research question 'What happens in teaching groups?' and provides the corresponding survey question numbers and headings. The full question details can be found in Appendix I.

The survey questions relating to the hypotheses and goals examined in this section used a 5-point Likert scale, rated with '1' for strong disagreement to '5'

Table 5.3: Mapping of hypotheses and goals to survey questions (Part 2)

Research question 'What happens in teaching groups?'			
Derived from focus groups		**Mapping to survey questions**	
G2	*Interaction in teaching groups* Find out how frequent participation in meetings about teaching is Find out if by chance interactions are frequent Find out if most members initiate interactions about teaching Find out if most members participate in interactions about teaching	Q8	Meetings about teaching are frequent in my teaching group.
		Q9	Chance interactions about teaching are frequent in my teaching group.
		Q10	Most members of my teaching group initiate interactions about teaching.
		Q11	Most members of my teaching group participate in teaching related events.
G3	*Atmosphere in teaching groups* Find out if teaching groups have an open and trusting atmosphere	Q13	The atmosphere in my teaching group is trusting and open.
H2	*Importance of atmosphere* The majority of academics say that an open and trusting atmosphere facilitates constructive interaction on teaching The majority of academics regards an open and trusting atmosphere as necessary for constructive interaction on teaching	Q25	An open and trusting atmosphere facilitates constructive interaction on teaching.
		Q26	An open and trusting atmosphere is necessary for constructive interactions on teaching.
H3	*Learning from others* The majority of academics have experienced interactions with colleagues that have had positive impact on their teaching	Q20	Interacting with colleagues on teaching has had a positive impact on my teaching.
G4	*Learning from others* Find out if academics have experienced interactions with colleagues that have had negative impact on their teaching	Q21	Interacting with colleagues on teaching has had a negative impact on my teaching.

for strong agreement (Questions 8, 9, 10, 11, 13, 25, 26) or options to indicate rate of occurrence, rated with '1' to '3'.

5.2.1 Interaction in Teaching Groups

The first group of questions (Questions 8 - 11) relate to the interaction in teaching groups (see Table 5.4 for results). With an average of 2.58 the question about the frequency of meetings received one of the lowest agreements across the survey. Over 50% of participants disagree or strongly disagree with the statement that meetings about teaching are frequent in their teaching groups. In comparison, chance interactions about teaching are more frequent, with over 50% agreeing or strongly agreeing that such interactions are frequent. One possible interpretation is that pre-organised meetings that deal with teaching matters are less frequent and that academics seek out their colleagues if they need to clarify teaching matters.

Table 5.4: Results for questions 8 - 11

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q8 – Meetings about teaching are frequent in my teaching group.							
18.8	**33.0**	22.5	22.8	2.9		2.58	276
Q9 – Chance interactions about teaching are frequent in my teaching group.							
7.2	21.7	15.2	**44.2**	11.6		3.11	276
Q10 – Most members of my teaching group initiate interactions about teaching.							
6.9	30.1	18.5	**38.4**	6.2		3.07	276
Q11 – Most members of my teaching group participate in teaching related events.							
4.8	13.9	25.6	**41.8**	13.9		3.46	273

The response pattern for the question on initiating interactions is interesting. The responses are fairly symmetric, with two strong concentrations for the

agreement (38.4%) and disagreement (30.1%) options. This could indicate a polarisation of teaching groups to either side of the neutral option based on this question.

The question on participation in teaching related events shows the strongest agreement within this group of four questions. More than 50% of answers are on the agreement side, just under 20% are on the disagreement side. This could mean that academics usually participate, if events are organised for them. This is in contrast to the responses on initiating interactions about teaching that shows close to 40% on the disagreement side.

The averages across the four questions on interaction are very close to the neutral point of '3' on the Likert scale. The standard deviations across the four questions work out to 1.11. These figures indicate that there is quite a wide spread of behaviours within the teaching groups that averages out in the middle of the spectrum presented to participants. In other words, there will be teaching groups with quite high levels of interaction, but also teaching groups with quite low levels of interaction.

5.2.2 Atmosphere in Teaching Groups

Questions 13, 25 and 26 referred to the atmosphere in teaching groups (see Table 5.5 for results). Over 60% of of participants judged the atmosphere in their groups as trusting and open. Only under 15% disagreed or strongly disagreed with having a trusting and open atmosphere. With a mean of 3.46 and a standard deviation of 0.98 there is still quite a variability from the disagreement to the agreement end of the scale.

The questions on the benefits and importance of a trusting and open atmosphere for constructive interactions on teaching received strong support. With means of 4.36 and 4.34 these questions showed some of the highest agreements across the survey. About 95% of participants agreed or strongly agreed. Compared to this very strong agreement, the current situation in teaching groups lags behind (with only just over 60% regarding the atmosphere in their teaching groups as trusting and open).

Table 5.5: Results for questions 13, 25 and 26

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q13 – The atmosphere in my teaching group is trusting and open.							
2.9	10.5	23.6	**45.5**	17.5		3.64	275
Q25 – An open and trusting atmosphere facilitates constructive interaction on teaching.							
0.0	0.3	4.5	**53.5**	41.6		4.36	286
Q26 – An open and trusting atmosphere is necessary for constructive interactions on teaching.							
0.0	0.3	5.6	**53.7**	40.4		4.34	287

5.2.3 Impact of Interactions

Questions 20 and 21 (see Table 5.6) dealt with the impact of interactions with colleagues on teaching. There is strong support for the positive impact on teaching from interaction with colleagues. Only very few participants have never experienced such impact. Nearly 50% have had a few interactions leading to positive impact and 50% had many of such interactions.

While close to 70% of academics never have experienced that interactions with colleagues have had negative impact on their teaching, such experience never the less exist. Close to 30% had a few such experiences and some academics have experienced this many times.

Participants were asked to comment on their experiences with negative impact. A large number of academics (49) took up the opportunity to comment, with comments relating to all answer options from 'Never' to 'Many times'. Some of the comments provided in the survey were very powerful, indicating deep negative impact, hurt and frustration. The comments from participants who had stated that they never had experienced negative impact included reiterations that such situations had not occurred or statements indicating that participants had dealt with potentially negative situations internally, without letting these impact on their teaching. Other comments emphasised the importance of interaction to

Table 5.6: Results for questions 20 and 21

Never	A few times	Many times		Average	Responses
Q20 – Interacting with colleagues on teaching has had a positive impact on my teaching.					
3.5	46.4	**50.2**		2.47	289
Q21 – Interacting with colleagues on teaching has had a negative impact on my teaching.					
67.6	28.9	3.5		1.36	287

learn from others and to find new approaches to teaching. It was pointed out that while trying something new can turn out to be a step into the wrong direction, such exploration is essential in reaching improvements and therefore not negative impact on teaching. As one survey participant wrote:

> R325: Trying something new irrespective of whether it works or not is a critical first step to improving teaching.

The majority of comments was made by participants who had experienced a negative impact on teaching. A wide range of descriptions were used to explain situations and attitudes of colleagues leading to a negative impact: negative attitudes to teaching; too busy to invest time into teaching; not being open about improving practice; being defensive and negative; refusal to communicate, compromise and discuss; lack of tolerance of other approaches; misuse of politics and status; disregard for less experienced colleagues; lack of information flow; communication of disagreements in teaching team to students; arrogance and pretending to be expert.

The resulting negative impact on teaching as reported by participants is wide reaching and was voiced by individual participants as follows. Participants feel forced to follow processes, policies and styles without underlying pedagogical reasoning. Secretive behaviours lead to overlaps in material taught and lack of knowledge of each other's disciplines, paired with inability to communicate, causes conflicts. Participants need to compensate for others who are less interested in teaching and in teaching improvements and are frustrated by the lower value placed on teaching as compared to research. Participants feel undervalued by

colleagues who teach into programmes of supposedly higher status or are under pressure, as their units need to attract students to retain jobs. Dominant groups from one campus determine what happens across campuses without sufficient consultation. Participants talked about dysfunctional teams, about their group being a 'pathological bunch of individuals' (R302) and about replacing the term 'coordinator' with the better fitting term 'un-coordinator' (R253).

There were some statements of strong impact on individuals. Participants reported being hurt by criticism rather than being supported, having been embarrassed in front of students as consequence of lack of information received from colleagues, having been put under pressure for lack of technology knowledge despite showing strong enthusiasm and innovation in teaching. There were comments about 'sustained bullying' (R27) and being 'derided' (R151) for teaching approaches. It was also commented that a change in teaching approaches can be initially difficult and requires, besides right pedagogical reasons, confidence in oneself.

A few participants looked beyond the immediate impact on their teaching. The following quote expresses frustration felt by a participant about the perceived inability of the University to resolve situations around poor teachers.

> R55: Ironically, students appear to be able to name poor teachers without any difficulty, and to apply objective assessment criteria to their judgements but for some reason it is beyond university academics and line managers to deal with the same issues dispassionately and constructively.

5.3 How Can Teaching Groups be Characterised?

Table 5.7 summarises the hypotheses and goals as they relate to the research question 'How can teaching groups be characterised?' and provides the corresponding survey question numbers and headings. The full question details can be found in Appendix I.

5.3.1 Teaching Group Types

Section 4.3 in the previous chapter introduced teaching group types and developed key factors for the characterisation of teaching groups that have led to

Table 5.7: Mapping of hypotheses and goals to survey questions (Part 3)

Research question 'How can teaching groups be characterised?'	
Derived from focus groups	**Mapping to survey questions**
G5 *Determining teaching group types* Find out of the types of the teaching groups identified in the survey	Derived from G2 and G3
G6 *Relating teaching group types to structural characteristics* Find out of what relationships there are between teaching group types and organisational structure and teaching focus of teaching groups	Derived from G5 and G1
G7 *Relating quality statements to group types and beyond* Find out how survey participants judge the characteristics of their teaching groups with regard to facilitation of high quality teaching Find out how survey participants judge the quality of teaching in their teaching groups Find out if statements on quality made by survey participants match the ranking indicated by teaching group types Find out if participants think teaching quality would benefit from closer interaction of academics on teaching Find out if participants see a need for improvements of teaching quality at the University in general	Q15 My teaching group shows characteristics that facilitate high quality teaching. Q19 The quality of teaching in my teaching group is high. Q18 I am well informed about the teaching of my colleagues in my teaching group. Q30 I think that teaching quality would benefit from closer interaction of academics on teaching. Q31 I see a need to improve teaching quality at this university.

corresponding survey questions. Going back to the questions behind Goals 2 and 3 (Questions 8 to 11 and 13), one can now calculate an index for each teaching group discussed in the survey. This was done by averaging the response values for these questions. The extreme points of the underlying scale can be labelled with the names for teaching group types suggested earlier. An average value of '1' would represent an *individualistic* teaching group, an average value of '5' a *tight-knit* teaching group.

The average value across the 271 teaching groups identified is 3.22. This puts the teaching groups overall at just beyond the halfway point on the scale towards tight-knit teaching groups. Figure 5.1 shows the distribution of calculated teaching group indices. It demonstrates that the full range of teaching group types is represented.

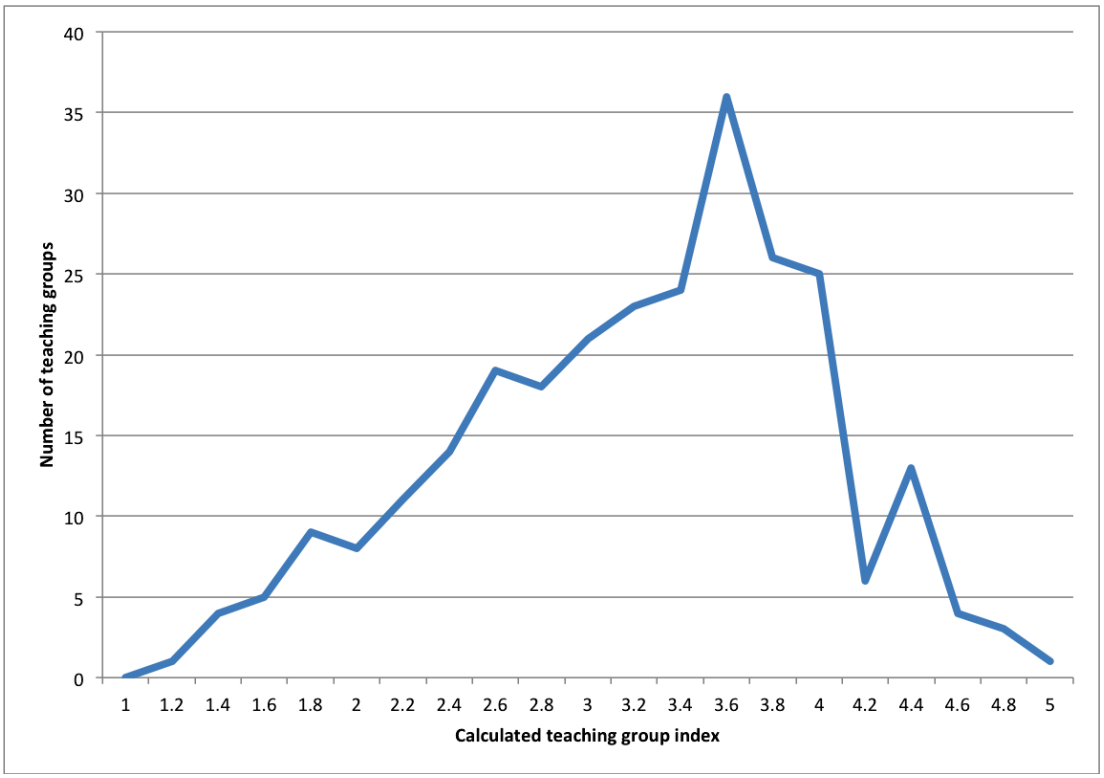

Figure 5.1: Calculated indices for teaching groups of survey participants

Section 4.3.3 examines the desirability of teaching group types based on the focus group data and arrives at the conclusion that tight-knit teaching groups are

better at facilitating engagement with teaching and learning about teaching than individualistic teaching groups. Based on the calculated teaching group indices for the survey teaching groups one can now look at a classification of these teaching groups. With a scale ranging from 1 to 5 one can classify as follows:

- Individualistic teaching groups: 1 to 2.4;
- Functioning teaching groups: 2.5 to 3.4;
- Tight-knit teaching groups: 3.5 to 5.

Using this scheme, the teaching groups of survey participants are classified as shown in Table 5.8. While discussion might be required where exactly the boundaries between teaching group types should be drawn, the numbers certainly show that there is considerable space for improvement. Using the suggested boundaries, just over 40% of teaching groups fall into the most desirable category of tight-knit teaching groups. 40% of teaching groups are labelled functioning and close to 20% are described as individualistic, indicating lots of space for improvement in terms of interaction of group members and group atmosphere.

Table 5.8: Distribution of teaching groups across teaching group types

	Individualistic	**Functioning**	**Tight-knit**
Number	52	105	114
Percentage	19.19	38.75	42.07

5.3.2 Statements on Teaching and Teaching Group Quality

The judgement of desirability of teaching groups presented in the preceding section was based on parameters derived from the focus group analysis. The survey also contained questions dealing directly with teaching quality. The next paragraphs present the answers to these questions in their own right. This is followed by linking the calculated teaching group indices with the answers to the questions on quality in relation to teaching groups, aiming at revealing potential correlations.

Table 5.9 shows the distributions of answers and the averages for Questions 15, 18, 19, 30 and 31 that deal with statements on teaching quality. About 65% of participants agree or strongly agree that their teaching groups show characteristics that facilitate high quality teaching. Only just under 10% disagree or strongly disagree with this statement. With 60% and about 5% the numbers are similar for the question on quality of teaching in the teaching group. While these numbers on agreement with high quality seem promising, the impression is different if one considers the high number of participants who chose the middle of the rating scale labeled 'Neither agree nor disagree'. This shows that 35% of participants cannot agree that their teaching groups show characteristics that facilitate high quality and that 40% cannot agree that the quality of teaching in their groups is high.

Table 5.9: Results for questions 15, 18, 19, 30 and 31

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q15 – My teaching group shows characteristics that facilitate high quality teaching.							
2.5	6.9	25.7	**46.7**	18.1		3.71	276
Q18 – I am well informed about the teaching of my colleagues in my teaching group.							
4.3	26.8	29.3	**33.3**	6.2		3.10	276
Q19 – The quality of teaching in my teaching group is high.							
1.5	3.6	36.0	**45.5**	13.5		3.66	275
Q30 – I think that teaching quality would benefit from closer interaction of academics on teaching.							
0.7	4.2	19.2	**53.1**	22.7		3.93	286
Q31 – I see a need to improve teaching quality at this university.							
0.7	4.6	29.9	**40.5**	24.3		3.83	284

The numbers for Question 18 show that only 40% of participants agree or strongly agree to being well-informed about the teaching of their colleagues, putting a question mark beside the ability to judge quality, as asked for in Questions 15 and 19. Table 5.10 splits the results for Questions 15 and 19 according to answers provided for Question 18. This shows that participants who feel better informed about the teaching of their colleagues see higher quality than participants who are less well informed. The numbers in the table are supported by Pearson's product moment correlations for Questions 18 and 15 (df = 264, r = 0.432, p = 0.000) and Questions 18 and 19 (df = 264, r = 0.501, p = 0.000). This could indicate that the teaching quality (and the quality of teaching groups) at the University is better than thought of by many academics, assuming that better informed academics have better insights.

Table 5.10: Results for questions 15 and 19 split according to answers given to question 18

	Strongly disagree or Disagree (Q18)	**Neither agree nor disagree (Q18)**	**Agree or Strongly agree (Q18)**
Average Question 15	3.29	3.57	4.15
Average Question 19	3.19	3.55	4.11

In the questions independent of teaching groups, 75% of participants agree or strongly agree that teaching quality would benefit from closer interaction on teaching (see Question 30, Table 5.9). This result is compatible with the answers for Question 20 (see Table 5.6) that strongly showed that interacting with colleagues had a positive impact on teaching. With 65% the support for the statement on the need for improving the teaching quality at the University is strong (see Question 31, Table 5.9). Only 5% of participants disagree, but a fairly large number (30%) did neither agree nor disagree. One possible explanation could be that academics do not know enough about the quality of teaching across the University. Based on the results of Question 18 that show that 60% cannot agree to being well informed about the teaching within their own teaching groups, it is likely that participants did not make a judgement, based on not being informed enough. Yet, unlike Questions 15 and 19, there is no correlation between how well

participants are informed (Question 18) and seeing the need for improvements in teaching quality at the University (Question 31).

The Pearson's product moment correlation shows that the calculated teaching group indices and the answers to Question 15 are highly correlated ($df = 269$, $r = 0.628$, $p = 0.000$). This means that how participants judge their teaching groups in term of characteristics that facilitate high quality teaching is highly related to the teaching group desirability derived via the calculated teaching group index.

For Question 19 the Pearson's product moment correlation also results in a high correlation with the calculated teaching group indices ($df = 269$, $r = 0.533$, $p = 0.000$). The participants' judgement of the teaching quality in their teaching groups is highly related to the desirability derived via the calculated teaching group index.

Based on these two strong correlations it can be assumed that the calculated teaching group index, and the desirability of high index values, correctly represent the views of the participants.

5.3.3 Comparison to Teaching Group Characteristics

As has been shown earlier in Table 5.2, the surveyed teaching groups can be set in relation to organisational unit and teaching focus. As before in the focus group data, the highest concentration of teaching group lies where academics from one unit and single subject area teach into a single subject area (52 teaching groups). No pattern emerges from the distribution of teaching groups across organisational unit and teaching focus.

Using the calculated teaching group indices, the relationship between teaching group types and the structural characteristics of teaching groups was tested. This test was done by calculating the averages across the indices of the teaching groups located in the cells of Table 5.2. These averages in relation to structural characteristics are presented in Table 5.11. Like for the focus group data, no pattern emerges that would suggest that certain structural characteristics might have a particular influence on the desirability of teaching groups.

Besides structural characteristics the survey asked questions about teaching group size, distribution across campuses and the number of teaching groups a participant belongs to. By calculating the analysis of variance (ANOVA) it can be tested if these factors have an influence on teaching group types as represented via the calculated teaching group index.

Table 5.11: Average of calculated teaching group indices in relationship to organisational unit and teaching focus

	Specific course	**Single subject area**	**One degree / specialisation within degree**	**Multiple subject areas / degrees**	**Other**
One unit, single subject area	3.31	3.22	3.21	3.53	3.9
One unit, multi-disciplinary focus	3.13	3.20	3.20	2.99	-
Multiple units	3.46	2.93	3.2	3.11	4
Other	3.1	2.4	3.8	3.25	3.3

The ANOVA for Question 5 on teaching group size and the calculated teaching group index reveals a significant influence of the independent variable teaching group size ($df = 269$, $F = 5.189$, $p = 0.05$). A closer inspection of the influence of the teaching group size is presented in Table 5.12. The numbers show that teaching groups with up to 10 members have a higher index than larger teaching groups. For teaching groups with over 20 members the drop in index, and therefore desirability, is considerable. A possible explanation is that communication and working together might be easier in smaller groups. Further, smaller teaching groups might provide more purpose for working together, and in consequence, receive a better rating.

In the context of teaching groups that stretch across multiple campuses, Question 7 asked for the relative size of the sub-group on the campus of the participant. The ANOVA shows a significant influence of Question 7 as independent variable on the calculated teaching group index ($df = 141$, $F = 5.683$, $p = 0.05$). Table 5.13 presents the details. The numbers show that the teaching group index for groups

Table 5.12: Influence of teaching group size on calculated teaching group index

Options Question 5	**Number of answers to all relevant questions**	**Teaching group index**
All	271	3.22
5 or less	107	3.27
6 to 10	95	3.30
11 to 20	49	3.11
More than 20	20	2.81

of participants located in the smaller part of a teaching group is considerably lower than for a participant located in the larger part. This could indicate that the larger sub-groups of teaching groups dominate and the smaller sub-groups miss out on interaction or communication. As stated earlier, issues regarding the validity of Question 7 need to be taken into consideration.

Table 5.13: Influence of size per campus in distributed teaching groups on calculated teaching group index

Options Question 7 (restricted to 'Yes' answers for Question 6)	**Number of answers to all relevant questions**	**Teaching group index**
All	143	3.20
More members	76	3.37
About same	35	3.07
Fewer members	27	2.80
(Not applicable)	5	–

For the number of teaching groups a participant belongs to (Question 2) the ANOVA calculation resulted in no significant influence on the calculated teaching group index.

5.4 What Outside Factors Influence Engagement?

Table 5.14 summarises the hypotheses and goals as they relate to the research question 'What factors outside teaching groups influence engagement with teaching and learning about teaching?' and provides the corresponding survey question numbers and headings. The full question details can be found in Appendix I.

5.4.1 Value of Teaching

Table 5.15 summarises the responses to questions that relate to the value given to teaching. In the opinion of the participants, teaching is valued highly among the members of their teaching groups, as indicated with 70% agreement. The results for the question on demonstrating a desire to improve teaching are nearly identical. With an average of 4.51 the question on caring about the quality of teaching in their groups has one of the highest ratings across the survey. It shows a near 100% agreement with caring about teaching quality within teaching groups. Together, these three questions create the impression that teaching is valued highly and that quality of teaching matters very much to the academics who have filled out the survey.

5.4.2 Relationships with Colleagues

Table 5.16 shows the results for the questions related to relationships to colleagues (Questions 17, 22 and 23). With 85% agreement there is strong affirmation that participants think they can learn from colleagues. The support for being able to help others to learn about teaching is nearly as high. Participants are encouraged to work on improving their own teaching when being surrounded by high quality teaching (75% agreement). These answers provide a strongly positive outlook on the potential of improving teaching based on interactions among colleagues.

5.4.3 Motivation for Teaching

Questions 27, 28 and 29 addressed motivation for investing effort into teaching. Table 5.17 provides the results for these questions. These values clearly show that the participants are driven by intrinsic instead of extrinsic motivation. The question on intrinsic motivation has one of the highest levels of agreement across

Table 5.14: Mapping of hypotheses and goals to survey questions (Part 4)

Research question 'What factors outside teaching groups influence engagement with teaching and learning about teaching?'			
Derived from focus groups		**Mapping to survey questions**	
G8	*Value given to teaching* Find out what value is given to teaching in teaching groups	Q12	My teaching group demonstrates a desire to improve teaching.
		Q14	Teaching is valued highly among the members of my teaching group.
		Q16	I care about the quality of teaching in my teaching group.
G9	*Relationship to colleagues* Find out if participants are influenced by the teaching quality of their colleagues Find out if participants think they can help colleagues with learning about teaching Find out if participants think they can learn from colleagues about teaching	Q17	I am encouraged to work on improving my teaching if my colleagues around me provide high quality teaching.
		Q22	I can learn about teaching from interacting with colleagues.
		Q23	I can help my colleagues to learn about teaching.
H4	*Motivation for teaching* The majority of academics is driven by intrinsic motivation to put effort into teaching	Q27	The effort I put into my teaching is driven by intrinsic motivation.
G10	*Motivation for teaching* Find out if academics are driven by extrinsic motivation to put effort into teaching Find out what factors contribute to intrinsic or extrinsic motivation to put effort into teaching	Q28	The effort I put into my teaching is driven by extrinsic motivation.
		Q29	The following are important for me to invest effort into my teaching ...
G11	*Leadership for teaching* Find out if academics experience effective leadership for teaching	Q24	I experience effective leadership with regard to teaching [from ...]

the whole survey (95% agreement, average 4.47), the question on extrinsic motivation one of the lowest (close to 35% agreement, average 2.85). Several follow-up question asked participants more specifically about what motivates them to invest

Table 5.15: Results for questions 12, 14 and 16

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q12 – My teaching group demonstrates a desire to improve teaching.							
2.2	7.3	20.0	**49.8**	20.7		3.80	275
Q14 – Teaching is valued highly among the members of my teaching group.							
2.9	6.2	22.3	**44.0**	24.5		3.81	273
Q16 – I care about the quality of teaching in my teaching group.							
0.4	0.0	2.6	42.3	**54.7**		4.51	274

Table 5.16: Results for questions 17, 22 and 23

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q17 – I am encouraged to work on improving my teaching if my colleagues around me provide high quality teaching.							
2.9	6.2	16.1	**48.9**	25.9		3.89	274
Q22 – I can learn about teaching from interacting with colleagues.							
0.7	1.7	6.3	**52.2**	32.1		4.20	287
Q23 – I can help my colleagues to learn about teaching.							
0.3	1.4	14.2	**65.6**	18.4		4.00	288

effort into teaching. The first follow-up question deals with an external motivator, the value of teaching for promotion. This question received an agreement as low as the question on extrinsic motivation and, in line with this result, the two questions are strongly correlated (df = 280, r = 0.348, p = 0.000). What has not been captured in this survey are the reasons for the low levels of extrinsic motivation. One possible explanation is that academics are not motivated by the prospects of promotion, yet, a potentially more likely explanation is that academics do not believe that they will gain promotion based on their teaching and that they therefore rate promotion lowly as motivating factor.

The next follow-up question asked about the value put on teaching by the participant's head of section as a motivating factor. Just 40% of participants agree or strongly agree. With an average of 3.08 this as well is a question with fairly low agreement. A possible explanation could be that academics do not perceive that their heads of section value teaching highly. Academics might link their heads of section with management and the perceived low value assigned to teaching by the University's management.

In contrast, the follow-up questions on colleagues receive substantially higher ratings. There is 55% agreement with the importance of the value colleagues put on teaching and close to 60% agreement with the importance of feedback received from colleagues. This aligns with results to earlier questions on value of interactions with colleagues. For example, Question 22 on the ability to learn about teaching from interacting with colleagues and the follow-up question on the importance of feedback received from colleagues are strongly correlated (df = 279, r = 0.333, p = 0.000).

The last two follow-up questions again received some of the highest ratings across the survey. 95% of participants agree that feedback received from students impacts on the effort they put into teaching (average 4.51). With 99% agreement and an average of 4.69 the motivating factor of the impact on student learning was even higher. These answers align well with the finding that participants are driven by intrinsic motivation to invest effort into their teaching.

5.4.4 Leadership for Teaching

Question 24 explored if participants experience effective leadership with regard to teaching. Table 5.18 provides a summary of the answers given. In the eyes of the participants, the University senior leadership team and the college leaders score

Table 5.17: Results for questions 27, 28 and 29

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q27 – The effort I put into my teaching is driven by intrinsic motivation.							
0.3	0.3	4.9	40.6	**53.8**		4.47	286
Q28 – The effort I put into my teaching is driven by extrinsic motivation.							
11.2	28.7	27.3	**29.4**	3.5		2.85	286
Q29 – The following are important for me to invest effort into my teaching ...							
... value teaching has for promotion							
13.1	23.3	26.5	**32.2**	4.9		2.93	283
... value my head of section (e.g., HoD, HoS, HoI) puts on teaching							
8.8	19.4	30.7	**36.4**	4.6		3.08	283
... value my colleagues put on teaching							
4.6	13.3	26.3	**45.6**	10.2		3.44	285
... feedback I receive from colleagues							
4.9	12.0	23.7	**49.8**	9.5		3.47	283
... feedback I receive from students							
0.3	0.0	4.5	39.0	**56.1**		4.51	287
... impact I have on student learning							
0.0	0.0	1.0	28.5	**70.5**		4.69	288

very poorly, with just 10% and under 10% agreement. With averages of 2.24 and 2.14 these questions are the lowest scoring questions in the survey. The next level going down the leadership hierarchy scored better, with close to 35% agreement for heads of section (average of 2.87) on providing effective leadership with regard

to teaching. These numbers shine a very critical light on the perceptions of leadership held by participants. It is interesting to observe that the leaders at college level received the lowest marks for leadership in teaching.

The positions of teaching and learning directors referred to in Question 24 had only been established about one year before the survey was conducted. Maybe this timeframe was not long enough to establish a leadership role and therefore the rating given by participants was fairly low (average 2.50).

The effectiveness of teaching group leaders received a moderate rating (average 3.21) and about 45% of agreement. Teaching groups are not formally established in the University. Therefore, teaching group leadership roles are only informal. This might have played a role in the answers provided by participants.

Teaching consultants also received a fairly low rating with regard to provision of effective leadership with 35% agreement. As with many of the questions on leadership, the percentage of participants who chose the middle option, neither agreeing or disagreeing, is quite high. This could indicate that many academics do not interact enough with the teaching consultants to make any other statement on their leadership. Another possible explanation is that the word 'leadership' did not express well enough what academics are looking for from teaching consultants.

Among all the leadership questions, the option on leadership provided by colleagues rated highest with an average of 3.75 and agreement of 70%. Seeing colleagues providing effective leadership with regard to teaching aligns well with other answers given in the survey. The answers on leadership provided by colleagues are strongly correlated with the answers to Question 17 on the encouragement derived from the high teaching quality by colleagues ($df = 259$, $r = 0.343$, $p = 0.000$). The correlation with Question 22 on learning about teaching from colleagues is even stronger ($df = 276$, $r = 0.493$, $p = 0.000$).

Lastly, about 45% of participants agree with gaining effective leadership from others outside the University. This seems to be a fairly substantial proportion if one considers that teaching collaborations usually remain within the boundaries of an institution. It seems that quite a number of academics are looking for teaching leaders beyond the University's boundaries and possibly engage with literature or other material on teaching.

Table 5.18: Results for question 24

Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**		**Average**	**Responses**
Q24 – I experience effective leadership with regard to teaching ...							
... from the university senior leadership team							
30.1	28.7	29.8	9.9	1.4		2.24	282
... from my College PVC							
31.4	**31.4**	30.0	6.4	0.7		2.14	280
... from my College Teaching and Learning Director							
20.4	28.1	**35.0**	13.9	2.6		2.50	274
... from my head of section (e.g., HoD, HoI, HoS)							
14.2	23.1	**29.2**	28.5	5.0		2.87	281
... from my teaching group leader							
8.1	15.8	32.0	**34.9**	9.2		3.21	272
... from teaching consultants							
14.1	19.5	**31.4**	28.9	6.1		2.94	277
... from colleagues							
2.9	5.7	21.4	**53.6**	16.4		3.75	280
... from others outside the university							
9.4	11.6	**34.8**	34.5	9.7		3.24	267

5.5 Cross-Referencing with Demographics

The survey concluded with questions on demographics. These included questions on research obligations (Question 37), leadership roles in teaching (Question 38) and distribution of time across research, teaching and service (Question 36). As the impact of research had formed an important topic in the focus group conversations, it is relevant to investigate a potential influence of these demographics on the other survey questions. This was done by calculating ANOVAs against the survey questions (Questions 8 to 31).

For Question 37 on research obligations significant influence was determined for the following questions:

- Question 8 (df = 265, F = 5.129, p = 0.05);
- Question 24a (df = 276, F = 10.746, p = 0.01);
- Question 24b (df = 274, F = 4.099, p = 0.05);
- Question 24c (df = 268, F = 4.378, p = 0.05);
- Question 26 (df = 280, F = 6.946, p = 0.01).

The corresponding tables showing the details for the relevant questions are provided in Appendix M. Participants without research obligations can concentrate more fully on teaching. They might also teach together with others who can focus on teaching as, for example, in a group of tutors supporting a paper. This explains why participants without research obligations report having more meetings in their teaching groups. These participants also rate the leadership provided by the University senior leadership team, the college leader and the college teaching and learning directors higher than participants with research obligations. A possible explanation might be that academics who focus on teaching engage more with management about teaching and therefore see more effective leadership. The participants further put higher value on the necessity of an open and trusting atmosphere. This could be based on these participants having to rely more on interactions about teaching than their researching colleagues.

For Question 38 on leadership roles in teaching, significant influence was determined for the following questions:

- Question 9 (df = 258, F = 4.082, p = 0.05);

- Question 12 (df = 257, F = 8.836, p = 0.01);
- Question 13 (df = 257, F = 8.268, p = 0.01);
- Question 14 (df = 255, F = 6.406, p = 0.05);
- Question 15 (df = 258, F = 7.797, p = 0.01);
- Question 16 (df = 256, F = 6.487, p = 0.05);
- Question 19 (df = 257, F = 6.608, p = 0.05);
- Question 23 (df = 274, F = 10.687, p = 0.01);
- Question 24h (df = 255, F = 14.017, p = 0.001);
- Question 27 (df = 273, F = 8.176, p = 0.01);

The corresponding tables showing the details for the relevant questions are provided in Appendix N. Questions 9, 12, 13, 14, 15, 16 and 19 all relate to the teaching groups of the participants. For all these questions, participants with leadership roles in teaching provide higher ratings for their groups than participants without leadership roles. Participants with leadership roles also have a higher confidence in their ability to help colleagues with learning about teaching. These participants experience more effective leadership from others outside the University. These results seem plausible as leadership in teaching implies a higher engagement with teaching.

For Question 36 participants were asked to enter percentage values for time spent on research, teaching and service. To enable the ANOVA calculations the percentage values were replaced with identifiers for values below and above the respective averages. For the percentage of time spend on research below versus above the average value of 28.80% significant influence was determined for the following questions:

- Question 16 (df = 257, F = 5.722, p = 0.05);
- Question 21 (df = 273, F = 4.913, p = 0.05);
- Question 27 (df = 273, F = 6.430, p = 0.05);

The corresponding tables showing the details for the relevant questions are provided in Appendix O. Looking at the details for these questions reveals that participants, who spend more than the average time on research, care slightly less about the quality of teaching of their colleagues. These participants have slightly fewer issues with a negative impact on teaching based on interactions with colleagues, and they have slightly less intrinsic motivation to spend effort on teaching.

For the percentage of time spend on teaching below versus above the average value of 53.70% significant influence was determined for the following questions:

- Question 21 (df = 274, F = 6.083, p = 0.05);
- Question 27 (df = 274, F = 4.684, p = 0.05);

Participants, who spend more than the average time on teaching, experience slightly more negative impact on teaching from interactions with colleagues and have a slightly higher intrinsic motivation to spend effort on teaching.

If one assumes that more focus on research equates to less focus on teaching, all results regarding percentages of time spent are consistent. Participants with more focus on teaching give slightly higher ratings to caring about teaching quality and intrinsic motivation. They have more experiences of negative impact, presumably as they are more engaged with teaching.

All the information gained from the cross-referencing of survey questions with demographics appears consistent with the other survey findings.

5.6 Concluding Comments of Survey Participants

At the end of the survey, 87 participants took up the opportunity to provide free-form comments. The resulting comments had an average length of 66 words. After an initial reading, the comments were grouped according to themes (comments were assigned to one theme only, choosing the dominant theme addressed). Six comments focused on encouragement to the researcher. These were personal messages wishing all the best for the completion of the study or acknowledged the importance of the research. As one participant wrote:

> R195: I think this research study is important because we work in teaching groups all the time and yet I have not come across any information, literature, or research on how such groups function in terms of teaching quality, professional development and support for teaching staff.

Twelve comments primarily explained personal circumstances of participants. For example, participants pointed out that they have only been teaching for a short time or had recently changed jobs, and stated that their circumstances had affected the way they had answered the questions.

Twenty-three comments focused on the way the survey was constructed or addressed the research design. Several comments were made regarding the question that asked to provide an indication on how effort is distributed across teaching, research and service. It was suggested that there should not be a requirement for these numbers to add up to one hundred. The sentiment was that the workload of academics is so large that many put in far more than one hundred percent to fulfil all obligations. Some participants alerted to the high administrative workload of academics and wanted to distinguish service from administration, suggesting that a fourth option for administration should have been available to complement teaching, research and service. Several participants pointed out that they belong to a number of teaching groups. As these teaching groups are very different, participants found it difficult to focus on only one group when answering the questions. A few participants commented that the questions asked in the survey were not clear, were leading or were too closed. A 'not applicable' option was asked for as well as more options to comment. Two participants suggested that a qualitative enquiry might have been better. One participant suggested that a question on passion for teaching was missing, another pointed out that 'talking about teaching' (R297) was not sufficient and that sharing of best practice with colleagues should be aimed at.

Eighteen comments primarily addressed the lack of value of teaching in higher education. A clear sentiment was expressed that research is valued higher than teaching and that this impacts negatively on teaching and learning, on academics and on students. Pressure is evident in the focus on the Performance Based Research Funding (PBRF), the emphasis on research publications and research income. Some participants are of the opinion that teaching counts little for promotion. Participants feel that good teaching and good teachers are not recognised

enough. The presentation of teaching awards has not changed this situation. The two following quotes provide examples how the perceived lack of value of teaching was expressed.

> R291: There is little emphasis put on teaching on a day to day basis at this university. everything is about research, research, research ... never mind the students! pbrf and promotion depend largely on research outputs. teaching is under-valued and under-supported.

> R253: Until the senior management team makes it clear to promotions committees that teaching counts as much as research early career staff like me will move away from improving teaching.

It was also commented that poor teaching is not addressed by the University:

> R202: In my experience (15 years plus) the development of and quality of teaching is left to the individual. Poor teachers are never identified and encouraged to improve and good teachers are ignored.

Throughout the comments, concerns were expressed with the current situation of teaching in higher education and its impact on academics and students. No comments were made suggesting it was desirable for teaching to have less value than research. One participant outlined how some universities had gone to extremes of abandoning quality teaching and praised the University for not going into this direction.

The remaining twenty-eight comments addressed a variety of themes. A number of comments referred to workloads and resourcing. With workloads being too high and resourcing being inadequate the pressures on academics are too high. This impacts negatively on teaching as well as on research, with current systems like PBRF adding extra pressure and leading to a shift of resources. It was mentioned that professional development opportunities such as seminars and workshops cannot be attended because of time pressures. As one participant wrote:

> R224: Universities are meant to be a place of reflection and higher learning, but few staff are finding the time for reflection of the quality required for innovative and insightful teaching and research.

A few comments were directed at the senior leadership of the University. It was expressed that effective leadership is not provided, and that resourcing issues are either not recognised or ignored. Critical comments were also made about the leadership in teaching provided by college leaders.

Several suggestions were made in relation to professional development. There was demand for more professional development, for general teaching topics and more specifically for information technologies related to teaching. It was also commented that professional development offered at the University is situated at a fairly low level of teaching expertise, not offering enough for experienced academics. There was call for closer connections to the educational evidence base for teaching and learning, for looking at how teaching is informed and what research basis there is. One participant suggested that all academics should have some form of teaching qualification. This was complemented by a comment asking for the inclusion of tertiary teaching training into PhD programmes. One participant cautioned against making compulsory interactions amongst staff for the development of teaching compulsory and used a mandated peer-review system as an example of a counterproductive intervention. The participant spoke in favour of creating structures that encourage voluntary interaction.

Several comments pointed out the need for more interaction about teaching. The following quote provides an example of such statement.

> R300: Too many of us sit behind closed doors and our teaching is autonomous

Participants suggested that the focus should shift from discussions about content to how this content should be delivered. Teaching in teams should be encouraged. A lip-service to teaching quality should be replaced by 'championing of teaching on the ground' (R313). The importance of an open and trusting atmosphere to encourage sharing among colleagues was emphasised.

Some specific issues affecting teaching quality were mentioned. It was outlined how the University's equivalence policy for teaching across campuses degrades teaching to the 'lowest common denominator' (R177). The re-development of a teaching programme is said to be driven by financial pressures and lacking sound pedagogical reasoning. Criticisms on a postgraduate programme state the lack of coherence and interaction of teaching staff, as there is no shared evaluation, and a lack of ownership, as staff have not developed the courses they are teaching and do not know how long they will be assigned to these courses. It was suggested

that infrastructure, departmental culture, and attitude and behaviour of heads of department should be investigated, to identify what facilitates motivation for teaching.

Only one participant described the teaching in the University, and especially in their area, outright negatively, talking of an 'incredibly low standard' (R73). In contrast, there were several comments praising the quality of teaching in the departments or colleges of participants. The importance of the departmental atmosphere for high quality teaching was emphasised, as the following quote shows.

> R268: The relative freedom and very supportive and cooperative atmosphere in the department is the key to high quality teaching. We all feel committed to the students and each other.

In summary, it can be said that the concluding comments of the participants reflected many of the topics that arose during the focus group conversations. The perceived dominance of research over teaching in the value system of higher education clearly surfaced again. Various issues around leadership, workloads and professional development were raised and dissatisfaction with current practices and situation was expressed.

There were a few critical comments relating to the survey questions but also a number of positive comments, supporting the research and acknowledging its potential value for the sector. Several participants alerted to the difficulty in focusing on one particular teaching group, as they belong to multiple groups with very different characteristics. This indicates that follow up research should address this issue and give participants the opportunity to discuss all of their teaching groups.

5.7 Summary of Quantitative Findings

Tables 5.19, 5.20 and 5.21 summarise the quantitative findings. These tables show the research questions, the associated hypotheses and goals and brief highlights of the findings.

Table 5.19: Summary of quantitative findings (Part 1)

Research question 'Do Academics Belong to Teaching Groups?'		
H1	*Teaching group membership* The majority of academics belong to at least one teaching group	Hypothesis confirmed; close to 95% of participants belong to at least one teaching group.
G1	*Teaching group parameters* Find out how many teaching groups academics belong to Find out how many members teaching groups have Find out where teaching groups are located in terms of organisational structure and teaching focus Find out if teaching groups are split over multiple campuses	About 40% of participants belong to just one teaching group, about 30% to two, about 20% to three, about 10% to four or more. About 75% of teaching groups have up to 10 academic members. Just over half of teaching groups stretch over multiple locations. No strong pattern emerged with regard to organisational unit and teaching focus
Research question 'What Happens in Teaching Groups?'		
G2	*Interaction in teaching groups* Find out how frequent participation in meetings about teaching is Find out if by-chance interactions are frequent Find out if most members initiate interactions about teaching Find out if most members participate in interactions about teaching	By-chance interaction is more frequent than interaction in meetings. Participation is higher than initiation. Across all teaching groups the interaction levels sit on the neutral point in the scale provided. Some teaching groups have low levels of interactions, others high levels.
G3	*Atmosphere in teaching groups* Find out if teaching groups have an open and trusting atmosphere	Over 60% of teaching groups have a trusting and open atmosphere, only under 15% do not.
H2	*Importance of atmosphere* The majority of academics say that an open and trusting atmosphere facilitates constructive interaction on teaching. The majority of academics regards an open and trusting atmosphere as necessary for constructive interaction on teaching.	With 95% agreement or strong agreement there is strong support among participants for facilitation and necessity. Both hypothesis statements are confirmed.
H3	*Learning from others* The majority of participants have experienced interactions with colleagues that have had positive impact on their teaching.	More than 95% of participants have experienced interactions leading to positive impact. The hypothesis is confirmed.
G4	*Learning from others* Find out if academics have experienced interactions with colleagues that have had negative impact on their teaching	More than 30% of participants have experienced interactions leading to negative impact. Many participants have commented to illustrate their experiences. Some participants have felt strong negative impact on their teaching and on themselves as persons.

Table 5.20: Summary of quantitative findings (Part 2)

Research question 'How can Teaching Groups be Characterised?'	
G5 *Determining teaching group types* Find out of the types of the teaching groups identified in the survey	The full range of teaching group types from individualistic to tight-knit is represented. The mean teaching group index is at 3.22, slightly above the mid point of the scale.
G6 *Relating teaching group types to structural characteristics* Find out of what relationships there are between teaching group types and organisational structure and teaching focus of teaching groups	The teaching groups are distributed across all combinations of organisational unit and teaching focus. No pattern emerges.
G7 *Relating quality statements to group types and beyond* Find out how survey participants judge the characteristics of their teaching groups with regard to faciliation of high quality teaching Find out how survey participants judge the quality of teaching in their teaching groups Find out if statements on quality made by survey participants match the ranking indicated by teaching group types Find out if participants think teaching quality would benefit from closer interaction of academics on teaching Find out if participants see a need for improvements of teaching quality at the University in general	65% of participants agree or strongly agree that their teaching groups show characteristics that facilitate high quality teaching. 60% of participants agree or strongly agree that the quality of teaching in their teaching groups is high. The statements on quality made by participants are highly correlated to the ranking indicated by teaching group types. 75% of participants agree or strongly agree that teaching quality would benefit from closer interaction on teaching. 65% of participants agree or strongly agree with the need for improving the teaching quality at the University.

Table 5.21: Summary of quantitative findings (Part 3)

Research question 'What Factors outside Teaching Groups Influence Engagement with Teaching and Learning about Teaching?'		
G8	*Value given to teaching* Find out what value is given to teaching in teaching groups	Close to 100% of participants care about the quality of teaching in their teaching groups. 70% of participants agree or strongly agree that their teaching groups show a desire to improve teaching and that their teaching group colleagues value teaching highly.
G9	*Relationship to colleagues* Find out if participants are influenced by the teaching quality of their colleagues Find out if participants think they can help colleagues with learning about teaching Find out if participants think they can learn from colleagues about teaching	75% of participants are encouraged to work on improving their own teaching when being surrounded by high quality teaching. 85% of participants think they can learn about teaching from interacting with colleagues. 85% of participants think they can help their colleagues to learn about teaching.
H4	*Motivation for teaching* The majority of academics is driven by intrinsic motivation to put effort into teaching	95% of participants agree or strongly agree to being intrinsically motivated to put effort into teaching. The hypothesis is confirmed.
G10	*Motivation for teaching* Find out if academics are driven by extrinsic motivation to put effort into teaching Find out what factors contribute to intrinsic or extrinsic motivation to put effort into teaching	With 35% agreement the power of extrinsic motivation is low. With 99% and 95% agreement the effects of impact on motivation from student learning and student feedback are very strong. The value colleagues assign to teaching (55% agreement) and the feedback received from colleagues (60% agreement) are also strong motivators. The value for promotion (just above 35% agreement) and the value heads of sections put on teaching (40% agreement) are fairly low motivators for participants).
G11	*Leadership for teaching* Find out if academics experience effective leadership for teaching	Participants rate the leadership they receive from the University management as fairly low, with percentages ranging from under 10% to just under 35%. There is substantial agreement (70%) that colleagues provide effective leadership. A considerable number of participants (45%) agree that others outside the University provide effective leadership.

5.8 Linking Qualitative and Quantitative Findings

As outlined in Section 3.2, this research uses a mixed method approach with an exploratory design. The role of the qualitative research phase, conducted via focus groups, was to explore the concept of teaching groups as contexts for learning about teaching in higher education. Based on these qualitative findings, the design of the quantitative research phase, conducted via a survey, was developed. Hypotheses were formulated, aiming at confirmation of selected qualitative findings, whereas goals served the purpose of guiding the collection of data from a wider group of participants on issues raised in the focus groups. This section looks at the congruence between qualitative and quantitative findings.

The qualitative research found that academics can relate to the concept of teaching groups. After an extension of the researcher's original definition, teaching groups could be identified for all focus group participants. This finding was confirmed in the quantitative research. The sub-questions on teaching group membership and characteristics also resulted in high levels of congruence between the research approaches. The teaching groups of focus group participants have on average about eleven members, whereas the majority of teaching groups of survey participants have up to ten members. A number of participants belong to several teaching groups and a number of teaching groups stretch across campuses. Both focus group and survey data show that there are a variety of ways in which teaching groups are linked to organisational structures and in which they focus on teaching. Neither set of data suggested any patterns in this regard.

The qualitative research explored the types of interactions happening in teaching groups and discussed the atmosphere in the groups. It was found that there is large variety across teaching groups. There are groups with high levels of interaction between members, who freely discuss issues relating to teaching and pedagogy. But, there are also groups where academics have only a minimal level of interaction about teaching and do not feel comfortable discussing problematic issues. By combining factors that characterise teaching groups, a scale was suggested that places groups on a continuum from tight-knit to individualistic teaching groups. The quantitative research has confirmed the variety across teaching groups. Teaching groups are found at either ends of the scale, with the average across the teaching groups placed just above the middle of the scale.

An open and trusting atmosphere was seen as very important by focus group participants for enabling constructive interaction around teaching. This was

strongly confirmed by survey participants. The focus group data show that academics have positive experiences learning from colleagues. Only a few negative experiences were mentioned. The survey data confirm this high level of positive impact of interaction with colleagues on learning about teaching. The survey data added more information on negative experiences. While considerably lower in numbers than positive experiences, free-form comments made in the survey suggest that negative experiences occur and can have severe impact on teaching and personal well-being of academics.

Based on the focus group data, a judgement on the quality of teaching groups was made and linked to the scales for classification of teaching groups. A preference for tight-knit teaching groups in support of engagement with teaching and learning about teaching was derived. The survey asked participants directly for judgements on the quality of teaching groups and teaching. These judgements correlated highly with the quality assessments derived from the factors developed in the focus groups that had been transferred into the survey. This correlation verifies the factors and scales developed in the qualitative research.

Both qualitative and quantitative research found no patterns between teaching group types and quality, and structural characteristics of organisational structure and teaching focus.

In the focus groups, a range of issues relating to teaching in higher education were addressed. Several of these issues were taken forward for examination in the survey. The findings across both research approaches match to a large degree. Academics can learn about teaching from their colleagues. Academics are intrinsically motivated to invest effort into teaching. Extrinsic motivation plays a relatively minor role. The effectiveness of leadership for teaching varies. The survey added more detail looking at the different levels of hierarchy in the University. The higher leadership levels in the University were assigned fairly poor ratings. In terms of value given to teaching by academics, the focus group data suggested a high level of variability, with participants rating the value assigned to teaching by some of their colleagues as fairly low. The picture presented in the survey with regard to the value of teaching across the University seemed more positive. Further, close to 100% of survey participants stated that they care about the quality of teaching in their teaching groups.

In summary it can be said that the findings from the quantitative research phase strongly confirm the findings from the qualitative phase. This is true for

the major questions asked in each research phase, but also for secondary aspects. Numbers derived from the focus group data match the numbers gained from the survey. Qualitative statements made in the open-ended sections of the survey mirror the themes discussed in the focus groups and the opinions voiced in these discussions.

The following chapter offers a discussion of the findings from both research phases. It picks up issues arising from the findings on motivation, engagement and community effects. The impact of management and organisatorial structures is discussed, as is the need for moving from passive towards active participation. Suggestions towards the utilisation of the teaching group concept in higher education are developed.

Chapter 6

Discussion

The previous two chapters have presented the findings from the focus group and survey research phases. This chapter draws on these findings, the conceptual framework outlined for the thesis and the literature investigated. A sequence of discussion points is presented that leads to an overall evaluation of the merits of the idea of using teaching groups as contexts for learning about teaching in higher education.

Before proceeding with the discussion, it seems prudent to recall the limitations for the generalisability of the findings, stemming from participant selection and aspects of the survey design.

- Participants for both research phases were recruited from only one university. Participants from other universities might have responded differently.

- Thirty academics participated in the focus group discussions. While the researcher felt that closure was reached with the number of focus group sessions conducted, it cannot be excluded that further participants might have provided different insights.

- The 30% participation rate for the survey provided a substantial volume of data, yet, it also means that 70% of academics at the University have not contributed to the study.

- For the teaching group specific questions, the survey participants were instructed to focus on only one of their teaching groups. As about 60% of participants reported belonging to more than one teaching group, this

means that data about a substantial number of teaching groups were not captured in the survey.

- The participants for both research phases were self-selected. It needs to be assumed that an interest in teaching will have been a factor for academics in agreeing to participate in the focus groups. While the data on wave comparisons indicate that the survey participants were representative of the total survey population, interest in teaching might still have played a role.
- The survey questions were developed specifically for this research based on the focus group findings. Using a new survey instrument is likely to impact on validity and reliability of findings.

6.1 Lone Force of Intrinsic Motivation

One of the strongest results of this research is the high degree to which the participating academics care about teaching and student learning. The question about the importance of impact on student learning for motivating academics to invest effort into teaching received the highest agreement across all survey questions and not one participant denied the importance of the impact on student learning for their motivation. The survey results showed that effort on teaching is strongly driven by intrinsic motivation, with extrinsic motivation playing a fairly minor role. The focus group data also showed that the participating academics possess a high level of intrinsic motivation and an internal desire to assist student learning and that these academics are proud of their contributions to student learning. These findings are in line with the literature examined that also established links between intrinsic motivation and wanting to do the best for student learning (Hardy, 2010), and the impact of student learning on the intrinsic motivation of academics (Stenfors-Hayes et al., 2010).

Intrinsic motivation is a powerful force that drives many academics to high levels of engagement with teaching and excellence in their teaching. Yet, a number of questions present themselves:

- Are all academics intrinsically motivated to engage with teaching?
- Does intrinsic motivation translate sufficiently into engagement with teaching?

- Is intrinsic motivation strong enough to counter the forces that distract from teaching?

The survey data point to intrinsic motivation across all participating academics. Yet, the focus group participants expressed disappointment that not all colleagues share an inner drive to engage with teaching. One thought to consider is that the focus group participants have expressed perceptions about others, which had to be confirmed by talking directly to the colleagues referred to. On the other hand, the focus groups participants would have had first hand experience from interacting with their colleagues and observing their engagement – or lack of engagement – with teaching and might therefore be seen as a reliable source of information.

These considerations still leave the question open, if the observations of the focus group participants are compatible with the survey data with respect to intrinsic motivation for engagement with teaching. Two explanations can be offered to address this apparent conflict. First, survey participants might have answered the questions on motivation in relative instead of absolute terms, meaning they might have rated intrinsic motivation higher to emphasise the contrast to extrinsic motivation. Further research would have to show if this was the case. Second, as the survey results indicate, the vast majority of academics might be intrinsically motivated to engage with teaching. Yet, a substantial number of these academics might fail to translate this intrinsic motivation into action. While the survey contained a number of questions about the level of engagement within teaching groups of participants, it did not directly question the participants about their own levels of engagement. Therefore, it might well be possible that academics regard themselves as intrinsically motivated, without necessarily translating this motivation into engagement with teaching or learning about teaching. Following on from this thought, one can look at possible explanations.

This research has identified a number of factors that work against engagement with teaching.

- Pressures in higher education: The literature names many factors that have led to increased pressures in higher education. Student numbers have grown (Brew, 2010b), funding in relative terms has decreased (Lomas, 2006), student diversity has increased (Hardy, 2010), competition for resources is high (Bradmore & Smyrnios, 2009), and public demand for accountability is on the rise (Kenny, 2009). Among the pressures the focus group participants

named were increasing workloads, a reduction in resources and increasing competition for students. Moves towards multiple campuses and internationalisation have further increased the challenges academics face. The statements of focus group participants were complemented by freeform-comments made by survey participants that alerted to the high workload of academics. All these factors put pressure on academics and challenge their ability to engage with teaching.

- Dominance of research: The dominance of research over teaching features strongly in the higher education literature (see, for example, Chalmers (2011) and Lea and Callaghan (2008)). Academics perceive that teaching is valued lower than research (Jauhiainen et al., 2009). The focus group participants strongly conveyed the perception that the University favours research over teaching. It was stated that the race for research outputs dominates university life and that academics are selected based on their research strengths, potentially leading to appointments of academics less suitable for teaching. While the survey questions did not address the perceptions on research versus teaching, the freeform-comments nevertheless referred to this issue. A clear sentiment was expressed that research is valued higher than teaching and that this impacts negatively on teaching and learning, on academics and on students.

- Weakness of management: In the survey, the strongest negative results were given for the questions on effective leadership with regard to teaching. The University senior leadership team and the college heads were given low marks for effective leadership for teaching, the heads of sections were rated only slightly higher. In their concluding comments to the survey, several participants wrote about the lack of effective leadership for teaching at the University. Focus group participants expressed their dissatisfaction that poor teaching is not addressed by the University. Examples of positive influence of university leaders on the uptake of teaching-related initiatives were named, yet, overall the discontent with the support provided by leaders in management positions seemed strong. The research has shown that the participants perceive the University's management as weak in creating supportive conditions for teaching, setting high expectations for teaching and following through if expectations are not met.

- Limited reward structures: While teaching has found its way into promotion criteria, strength in teaching is still seen as of less value than strength in research (Cashmore & Ramsden, 2009; Young, 2006). There was consensus among focus group participants that promotion based on teaching is difficult to achieve, especially for senior ranks. While focus group participants spoke of the positive influence of having teaching award winners in their groups, the overall impact of these awards is limited (Halse et al., 2007). These findings indicate that the sector does not do enough to value and encourage excellence in teaching, meaning that opportunities on individual and institutional levels are lost.

- Lack of grounding in pedagogy: Academics traditionally come from a research and not a teaching background (Ginns, Prosser, et al., 2007) and generally have no teaching qualifications (Cilliers & Herman, 2010). Focus groups participants expressed the need for continuing professional development in teaching for academics. Participants with a teaching as opposed to research background, either in their qualifications or previous work environments, spoke about the positive impact of deeper knowledge of pedagogy and of practices grounded in a teaching culture. The generally prevalent lack of grounding of academics in pedagogy, combined with the low incentives and management pressures to gain such grounding, puts teaching in higher education at a disadvantage.

These factors challenging teaching in higher education show the forces in place that work against engagement of academics with teaching. Intrinsic motivation seems to be the only counter force. Figure 6.1 shows a graphical representation of this situation. The lone status of intrinsic motivation may explain why many academics do not show more engagement with teaching. To answer the questions posed earlier: The majority of academics might well be intrinsically motivated to engage with teaching, yet, for a large proportion of these academics, this motivation does not seem to lead to sufficient engagement with teaching. For these academics intrinsic motivation may not be strong enough to counter the forces that distract from deeper engagement with teaching. If one is not content accepting the current situation on the level of engagement with teaching, questions need to be asked how this situation can be addressed. Before doing so, the next section focuses on discussing the level of engagement of academics with teaching, as established in this research, in more detail.

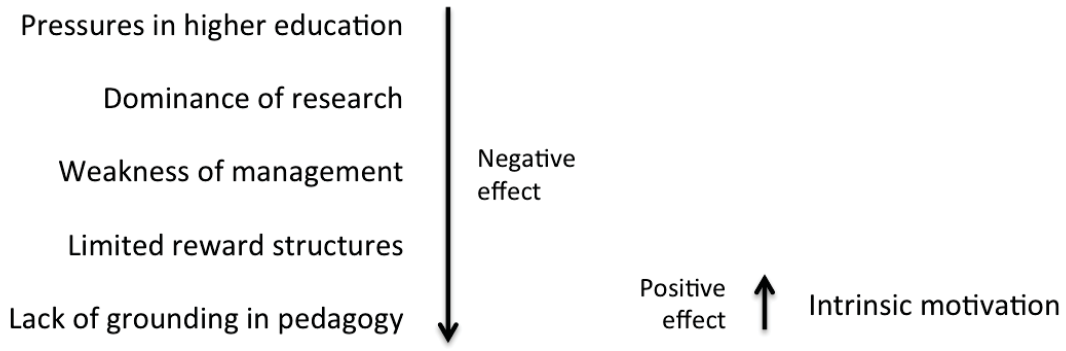

Figure 6.1: Forces in higher education affecting engagement with teaching

6.2 Landscape of Engagement

The engagement of academics with teaching can be examined by looking at three different types of engagement.

- *What to teach*: Looking at organisational issues around teaching, such as what is covered in a course or who teaches what;
- *How to teach*: Looking at pedagogy, at how material is delivered and assessed to best achieve learning outcomes;
- *Why to teach in a specific way*: Taking a research approach to examining why certain ways of teaching are successful/unsuccessful and how improvements could be made.

This research has found that there is wide-spread engagement in the type of engagement referred to as *what to teach*. All teaching groups examined in the focus group research were seen as fulfilling their obligations around organisational issues of teaching. The research classified teaching groups on a scale from *individualistic* to *tight-knit* groups. Even individualistic teaching groups were seen as addressing the issues around what to teach and, therefore, satisfy the level of organisational engagement. As such, by definition, all teaching groups covered in the survey fulfil this level of engagement.

The type of engagement named *how to teach* is, according to the findings of this research, less well covered. The teaching groups identified as tight-knit

seem to engage with questions around how to teach to a sufficient level. For *functioning* teaching groups, located on the scale between individualistic and tight-knit groups, there will be some level of engagement with pedagogy, yet, possibly not to the degree required to fully address the needs of teaching and student learning. Only around 40% of teaching groups, from both focus groups and the survey, have been classified as tight-knit, suggesting the conclusion that academics in the remaining 60% of teaching groups do not engage with how to teach to a level wished for.

Academic development programmes address what has been termed here as *how to teach*. While a variety of academic development programmes is readily available, uptake of these programmes is relatively low (Hanbury et al., 2008). Academics who would need assistance with their development as teachers are less likely to enrol than others on a higher level of expertise (Kember, 2009; Lucas, 2000). This lack of uptake supports the conclusion reached in this study that a sizable proportion of academics does not sufficiently engage with pedagogy and how to teach.

The type of engagement looking at *why to teach in a specific way* was only touched on in the focus groups and not addressed in the survey. A small number of focus group participants talked about opportunities for engaging in research about teaching. In the literature, the research approach to teaching is generally covered under the heading of Scholarship of Teaching and Learning (SoTL). Yet, it is reported that the level of engagement with SoTL is fairy low (Haigh et al., 2011; Vardi & Quin, 2011). While high-quality teaching might not require engagement with SoTL, it seems that the higher education sector would benefit from an engagement of a larger number of academics with teaching at this depth.

Figure 6.2 depicts the landscape of engagement of academics with teaching across the different types of engagement as seen by this research. A development towards a fuller coverage of *how to teach* plus an increase in engagement with research on teaching in higher education should be of benefit to the University and likely also to the wider sector.

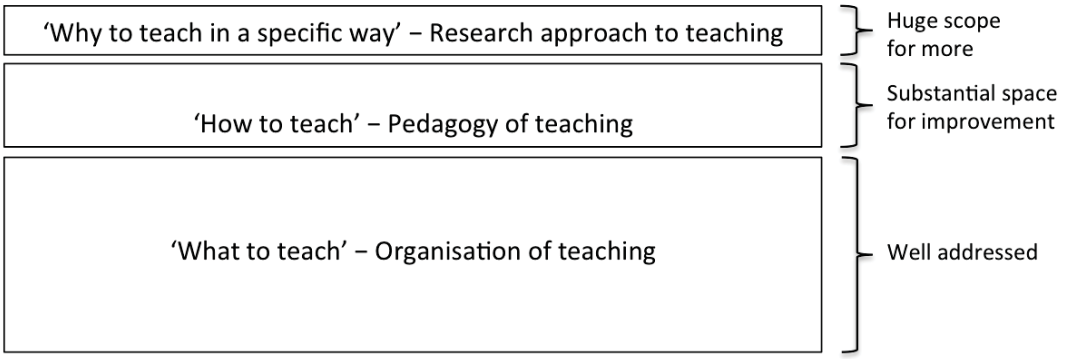

Figure 6.2: Landscape of engagement with teaching across the different types of engagement

6.3 Community Effects

The studies on community-based approaches to academic development, reviewed as part of this research, reported strong positive impact for participating academics. A new sense of collegiality and community makes academics feel safe and valued (Darwin & Palmer, 2009; Schlitz et al., 2009). New skills are gained (MacKenzie et al., 2010), thinking is stimulated (Waterman et al., 2010), reflection increases (Byrne et al., 2010). The only downsides that were reported in the studies reviewed related to the time requirements for participation (Byrne et al., 2010; MacKenzie et al., 2010).

Many focus group participants of this research discussed a similar positive impact within the contexts of their teaching groups. There are effects on the personal well-being of academics, with feeling supported, valued and safe, and there are benefits on teaching and learning about teaching, both for the individuals and their groups. The teaching groups of these academics, who described such positive impact, were classified as tight-knit teaching groups and are comparable to communities.

This research also found many teaching groups, at the individualistic end of the *scale of desirability* suggested, that do not show community characteristics. In these groups, academics largely work on their own, dialogue about teaching is limited, academics feels less supported and are less comfortable bringing up

teaching-related problems. These teaching groups, while they exist as groups, cannot be called communities. Based on the benefits associated with communities, as reported in the literature and confirmed by members of tight-knit teaching groups, academics in individualistic teaching groups seem to be at a disadvantage.

In the survey phase, this research examined on a larger scale, if academics think they can learn from their colleagues about teaching and think that they can, in turn, contribute to the learning of these colleagues. The survey results showed overwhelming support for both of these suggestions. This finding leads to the following conclusions. There is a large potential for academics to learn from each other, and together, about teaching. In tight-knit teaching groups this is happening already, in functioning teaching groups to a degree. In individualistic teaching groups this potential is not fulfilled. The challenge therefore is to transform such teaching groups into tight-knit teaching groups.

The survey also asked for negative experiences from interacting with colleagues about teaching. While the number of positive experiences was substantially larger, a sizable number of negative experiences were reported. Like the question about positive experiences, this question was not linked to teaching group membership and a large number of descriptions showed that conflicts arose between individuals. Moving to a community setting should help to prevent a number of these negative experiences.

At the outset of this study, criteria for the comparison of teaching groups to other community-based approaches were suggested (see Table 2.2). These criteria can now be revisited to evaluate if the investigations undertaken confirm the characteristics of teaching groups that were proposed at the outset. Taking the endpoints of the scale suggested for teaching groups, Table 6.1 shows how tight-knit and individualistic teaching groups stack up against the originally proposed characterisation.

Looking at formation, timeframe, membership and relationship to organisations, all teaching groups, across the scale, match up with what has been originally proposed. This, importantly, includes the aspect of membership by default, which forms a crucial point of departure from other community-based approaches that rely on voluntary membership. For the other criteria there are differences between teaching groups at the different ends of the scale. Tight-knit teaching groups are very close to the picture of teaching groups portrayed at the outset

Table 6.1: Revisiting teaching group criteria

Criteria	**Teaching groups (as characterised at outset of research)**	**Tight-knit teaching groups**	**Individualistic teaching groups**
Purpose	High levels of engagement with teaching by majority of academics	Fulfilled	Requires improvement
Formation	Teaching groups (not communities) exist already	Confirmed	Confirmed
Time frame	Groups exist over many years	Indicated (but not fully addressed in research)	Indicated (but not fully addressed in research)
Membership	By default	Confirmed	Confirmed
Relationship to organisation	Based on the structures implemented by an organisation (university)	Confirmed	Confirmed
View on members	Equals	Confirmed (based on collegial exchange)	Indications that members with primarily research focus regard members with primarily teaching focus as of less value
Degree of engagement	Significant engagement of all negotiated by group	Significant engagement in collegial atmosphere	Engagement based on formal structures
Source of knowledge	From members with outside help as desired	(not sufficiently addressed in research)	(not sufficiently addressed in research)

of the study. Individualistic teaching groups fall short of what was proposed in terms of interactions among members and atmosphere within the groups.

The research has shown that the vast majority of participants could identify with the teaching group concept, confirming the idea that teaching groups fully cover a university, as was depicted in Figure 2.1. In light of the findings on the distribution of teaching groups across the scale from tight-knit to individualistic, this picture should be re-drawn. While the coverage of the institution with teaching groups remains unchanged, different shadings can be used to indicate the distribution of the more desirable tight-knit teaching groups to the individualistic ones in need for improvement. Figure 6.3 shows this new representation.

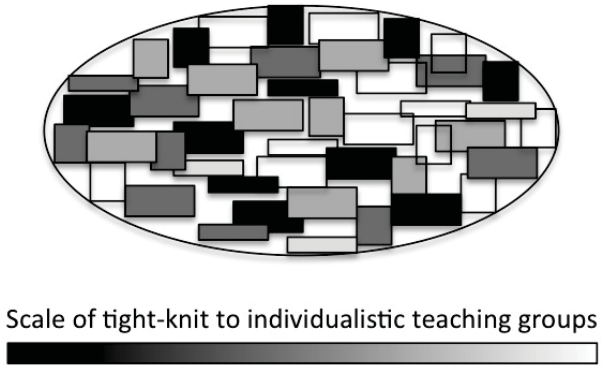

Figure 6.3: Coverage of institution with teaching groups across the scale of desirability

6.4 Management versus Organisational Structures

This research has examined the relationship of teaching groups to organisational structures such as departments and institutes. A variety of combinations was found and is illustrated in Figure 6.4.

- Teaching groups lie within the boundaries of organisational units;
- Teaching groups cross the boundaries of organisational units, yet remain within the encompassing unit (such as a School or a College);

- Teaching groups cross organisational units on multiple levels and/or include individuals from outside the institution.

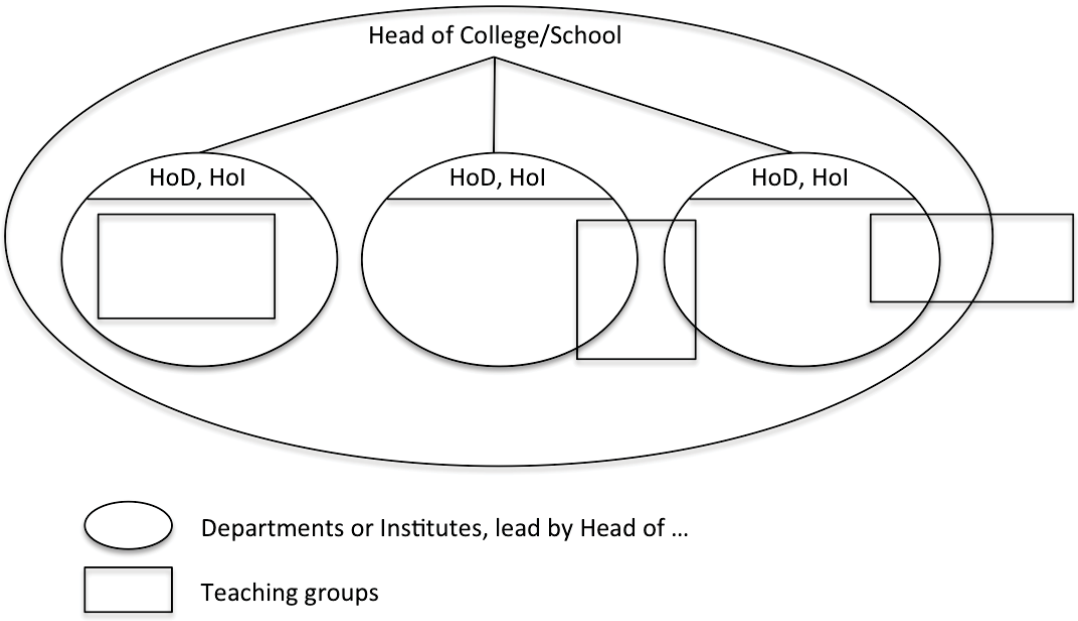

Figure 6.4: Management structures versus organisational structures underlying teaching groups

While the investigations have found no links between the relationship of teaching groups to organisational structures and the placement of teaching groups on the scale of desirability, the variety of relationships nevertheless plays an important role when thinking about how to develop teaching groups. One aspect of moving individualistic teaching groups along the scale towards becoming tight-knit teaching groups lies in the degree of engagement of the group members. As has been outlined earlier, the forces in play in higher education hinder more engagement, which is particularly required at the pedagogy level. The perceived weakness of university management, in encouraging more engagement and in following up on poor teaching, has been described.

These thoughts lead to calling on university management to address this weakness. Two approaches come to mind. First, management could work with teaching groups and parameters for engagement and achievement could be set on teaching

group level. Second, management could work with individual academics, setting individual targets, to be fulfilled by these academics within their respective teaching groups. Looking at the relationship between teaching groups and organisational structures established in the research, only the second option seems feasible. A large number of teaching groups spans multiple organisational units or even includes individuals from outside the institution. This constellation brings management issues. A manager will not be the line manager of all teaching group members, and, looking across all teaching group members, two or more managers will potentially be in charge.

Building on lines of management to the individual academic seems to be a more promising approach. Institutions will already have mechanisms in place, such as annual performance reviews, that facilitate the setting of goals and the monitoring of achievement. While teaching is likely to already feature in these reviews, the call to university management made here is to put a much stronger focus on teaching. If, via such increased focus, the individual academic can be encouraged to engage more strongly with teaching and learning about teaching, the teaching groups associated will benefit. The roles of the teaching groups will be to provide a home for the academic, supporting them in fulfilling their teaching-related goals. Taking the line management outside the teaching groups fits well with what is recommended in the literature. While managerial support is required to strengthen initiatives, the work within groups should be characterised by collegiality, self-determination and internal leadership (Stigmar, 2008; Byrne et al., 2010; Darwin & Palmer, 2009).

6.5 Moving from Passive to Active Participation

The definition of teaching groups builds on *membership by default*. This is a core aspect of the definition and an important departure from voluntary participation. This research has shown that there are many teaching groups, called tight-knit groups, that are characterised by close collaborations and active participation of the majority of their members. For these teaching groups, the majority of members have made the transition from passive to active group members. In contexts of these groups, the distinction between membership by default and voluntary participation is not critical. The situation is different for individualistic teaching groups. These groups lack active participation, in interactions around teaching

and learning about teaching, of a substantial proportion of their members. Individuals are still members of their teaching groups, yet have not made the step towards active participation.

The literature on academic development and community-based approaches emphasises the importance of voluntary participation (see, for example, Darwin and Palmer (2009) and Wenger et al. (2002)). Part of the argument brought forward in this thesis is that voluntary participation is not enough to achieve engagement of a majority of academics in learning about teaching, which has been shown by looking at current participation rates in community-based approaches and academic development offerings. Therefore, this thesis has argued to build on membership by default and to use teaching groups as the 'home' for engagement in teaching, but also to involve line management to demand more and deeper engagement with teaching. Figure 6.5 depicts what this research suggests.

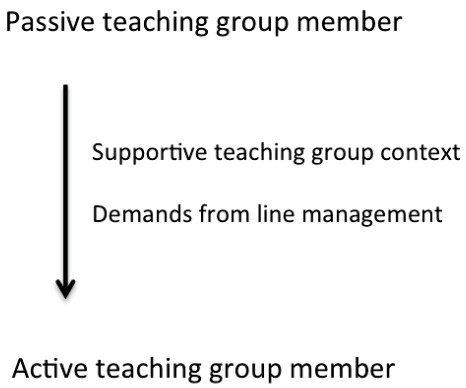

Figure 6.5: Transition from passive to active teaching group membership

The justification for the departure from reliance on voluntary participation is based on a number of arguments.

- Need to affect change: With academic development units, formal and non-formal courses and community-based initiatives, the higher education sector provides rich opportunities for academics to engage with learning about teaching. Yet, the uptake of these opportunities is not strong enough. Academics in need of deeper engagement with teaching do not participate, others who engage find it difficult to transfer new knowledge into practice,

as they are lacking supportive environments and understanding from colleagues (Ginns et al., 2008; Bamber, 2008). As a number of focus group conversations have shown, participants are frustrated by the lack of engagement of colleagues and the inactivity of the University's management. These arguments point towards a need for change.

- 'Demanded' participation can work: Focus group participants brought forward the introduction of compulsory peer observations as example of a failed approach to deeper engagement with teaching. Yet, compulsory engagement with the new e-learning system was discussed as successful, leading to an increased level of sharing among all involved in the transition, and to the pulling along of initially less motivated group members. This research has not analysed these instances in enough detail to extract factors critical for success. But, what could be seen clearly is that leadership by management, down to demanding participation, can have positive effects on the group overall and on the individuals involved.

The success of facilitating a move from passive to active teaching group membership will depend on a number of factors. In light of the increased managerialism prevalent in higher education today, it will be extremely important to motivate any demand for increased involvement with learning about teaching appropriately. Arguments should build on the mission of universities relating to teaching and learning. The impression of conducting administrative bookkeeping exercises must be avoided. Making a clear distinction between managerial demand for more engagement with learning about teaching on one side, and freedom of implementation on the other side, will be a crucial success factor. Academics, on individual and teaching group levels, should be free to choose topics and forms of engagement with learning about teaching. Theories of adult learning emphasise how important it is for adult learners to see meaning in what they study and to take responsibility for their learning directions (Illeris, 2007). The approach suggested in this discussion is compatible with these theories, as it advocates that academics, as adult learners, take responsibility of the 'what' and 'how' of their learning about teaching. An important issue will also be to help academics gain the required knowledge in how to approach deeper engagement with teaching and potentially research about teaching, as the literature shows that academics tend to lack foundations in pedagogy and learning about teaching (Ginns, Prosser, et al., 2007; Kandlbinder & Peseta, 2009).

6.6 Making Teaching Groups Work

As has been established in this research, there are already many teaching groups that provide their members with a supportive, collegial atmosphere and rich opportunities for learning about teaching. Further research needs to determine why these groups have developed in such positive ways. For other teaching groups, that are in need of improvement, a variety of measures will be required. Addressing the weakness of management with regard to teaching, based on line management of the individual academic, has already been suggested. A further suggestion lies in officially acknowledging the existence of teaching groups, which should bring the following advantages:

- Having a name to refer to a concept allows bringing this concept to the forefront, for example, in organsational charts. This is of importance especially where organisational structures are focused on research and where teaching responsibilities are distributed across organisational units.

- Talking about teaching groups allows individuals to identify 'where they belong' in terms of teaching, making this the first step towards finding their home for teaching, among others with related teaching responsibilities.

- Having teaching groups defined allows identification of all members of a teaching group. This in turn sets a starting point for the organisation of joined interaction and initiatives.

If teaching groups can be put on the map of higher education institutions, and if management issues can be addressed, a start is made in altering the forces affecting engagement with teaching. Figure 6.6 shows how this would begin to balance these forces.

While this research has not been able to focus on how the collaboration within teaching groups should be structured, some suggestions can be made. These suggestions build on recommendations from the literature that emphasise the importance of self-determination within groups (Byrne et al., 2010; Darwin & Palmer, 2009) or by individuals (MacKenzie et al., 2010; Waterman et al., 2010). Research participants have spoken of the positives of interacting with academic developers and of participating in academic development programmes, if structured appropriately, suggesting how valuable it can be to reach beyond the boundaries of the group. The suggestions outline how a teaching group might want to structure

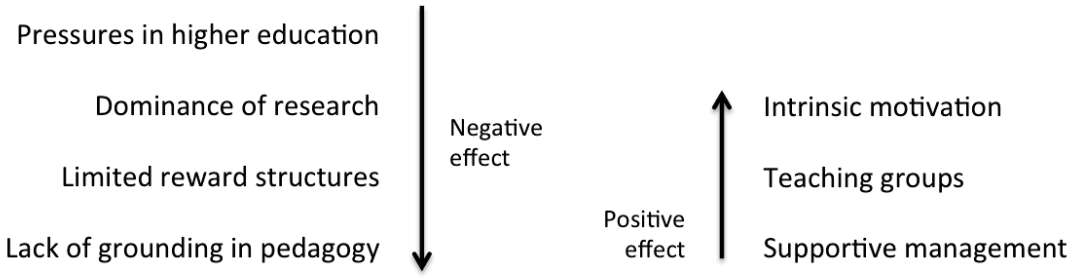

Figure 6.6: Forces affecting engagement with teaching revised

their collaborations. This is seen in addition to facilitating rich conversations between group members, addressing needs and interests, as they will arise spontaneously.

- Group goals: The teaching group discusses if there are specific issues to be addressed that affect the whole group. Once issues are identified, it is discussed if and how these issues will be addressed. Group members will work closely together and might invite others, such as academic developers, to provide assistance.

- Individual goals: The teaching group discusses expectations laid upon each group member. For example, everyone might be expected to identify one area for personal improvement or exploration per semester or year, to provide a plan of action and to report back to the group. Issues addressed and measures taken will be up to the individual, who is welcome to seek outside assistance.

The next concluding chapter of this thesis summarises the research undertaken. It states key contributions, as well as limitations and future research directions. Implications for practice are outlined and recommendations are given.

Chapter 7

Conclusion

This chapter provides the conclusions of the research. It summarises the research by revisiting the research objectives and then highlights the key contributions. Limitations and directions for future research are outlined. Implications for higher education practice and recommendations for higher education institutions are formulated.

7.1 Summary

Based on a theoretical framework of constructionism and postpositivism, this research has employed a mixed methods approach to investigate the potential of teaching groups for learning about teaching in higher education. A qualitative research phase, using focus groups, was followed by a quantitative research phase, implemented via a survey, combining to an exploratory research design. Both research phases were conducted at one New Zealand university. Ethics approval and institutional permission were obtained prior to commencement of the research interventions.

The research defined the concept of teaching groups and then proceeded to explore in the focus group research phase if and how participating academics can relate to teaching groups, how their teaching groups are characterised and what is happening in these teaching groups. Based on the focus group findings hypotheses and goals were formulated for the survey research, aiming at a deepening of the understanding of teaching groups and teaching in higher education, and at confirmation of the focus group findings.

Section 2.5.2 states the research objectives and questions for this research. The findings for the research questions have been summarised in Section 4.5 for the qualitative research phase and in Section 5.7 for the quantitative research phase. The following paragraphs relate these findings to the research objectives.

The first research objective was to explore if and in which ways the participating academics see themselves as belonging to teaching groups. This objective has been fulfilled. First, membership in, and the characteristics of, teaching groups have been explored in the focus group research. It was found that the participating academics could identify with teaching groups and that a variety of organisational structures and teaching foci underlay teaching groups. These first findings were confirmed in the survey research.

The second research objective was to explore the potential of teaching groups in fostering learning about teaching. This objective has also been achieved. The exploration of teaching groups with the focus group participants has helped to understand what is going on in teaching groups in terms of interactions and atmosphere. It has also uncovered what challenges the participating academics face in higher education and how these challenges impact on teaching. It was established that the participating academics are intrinsically motivated to invest effort into teaching, that they value feedback from students and colleagues and want to work towards improvements in teaching. Again, these findings were confirmed in the survey research. Yet, both research phases also showed clearly that not all is positive. Based on the assessment provided by the research participants, there is both need and scope for improvements in teaching and learning about teaching. Analysis of the teaching groups of the participants showed that just under half of these groups are on the positive side of a scale of desirability developed by this research. These teaching groups share characteristics with learning communities and already foster learning about teaching. The other teaching groups, which make up just over of half the groups investigated, provide less than ideal environments to their members. In these groups, opportunities for learning about teaching are missed out.

The third research objective asked for recommendations about whether teaching groups could be used in furthering learning about teaching. This research can go as far as suggesting that teaching groups are a promising approach to further learning about teaching. The research has been able to get insights into teaching groups that already have positive impact on teaching and learning about teaching.

The research has shown that, within the limitations of this study, teaching groups encompass the vast majority of academics with teaching obligations. Teaching groups therefore provide a mechanism for addressing academics that goes beyond what can be achieved with calling for voluntary participation. Teaching groups are based on joint teaching obligations of academics instead of using organisational structures. This brings the advantage of relevance and shared mission. Participating academics have strongly confirmed that they care about the quality of teaching within their groups. With all these characteristics it seems that teaching groups form a promising concept for working towards improvements in learning about teaching and the aspect of the research objective, asking for *whether* teaching groups could be used, has been answered positively.

A related aspect of the third research objective would be asking for *how* teaching groups could be used in furthering learning about teaching. This has been touched on by the research, yet has not been fully answered. The research has described the current situation around teaching groups. It has explored the thinking of participating academics around teaching and learning about teaching, looking at interactions with colleagues, the perceptions of quality around teaching, and motivation. The research has identified criteria to classify teaching groups and has suggested which teaching groups are more desirable than others. But, the research has not uncovered why teaching groups are the way they are. In discussing the research findings, the situation of teaching in higher education, the dominance of research over teaching, the resource and workload challenges, and the lack of grounding of academics in pedagogy were reviewed. In particular, the perceived weakness of management with regard to leadership in teaching has been discussed, as well as the organisational structures in higher education institutions, that often cut across teaching responsibilities. Recommendations have been made to improve management by using existing line management structures to the individual academic, while using teaching groups as supportive environments. As an important step it was suggested to officially acknowledge teaching groups in institutions.

7.2 Key Contributions

The key suggestion for increasing engagement of academics with teaching and learning about teaching developed in this research is to build on already existing

structures. Academics are already members of groups who have shared teaching responsibilities and close connections via teaching. The first contribution of this research is to name these groups as teaching groups, to recognise that there is a variety of ways in which these groups are composed, and to make these groups visible within institutional structures that are often built around research interests.

Having teaching groups identified allows examination of what interactions about teaching are taking place within these groups and what type of work environment, with regard to teaching, academics experience. An important contribution of this research is that key factors for the classification of teaching groups have been derived. This classification allows placing teaching groups on a scale from being highly supportive of engagement with learning about teaching, to providing an environment which makes it difficult for academics to engage in learning about teaching. Having an instrument for the classification of teaching groups will allow institutions in higher education to gain better insights into the work environments their academics face with regard to engagement with teaching.

This research has established how important a supportive work environment with regard to teaching is. Teaching groups that have a highly supportive environment have characteristics similar to learning communities and communities of practice. Members of these groups engage in more and more meaningful conversations about teaching, they feel encouraged, valued and supported. Teaching in these groups benefits as the majority of group members are involved. Teaching groups on the other end of classification scale provide far less supportive environments to their members. These groups exist, yet they cannot be called communities. The research has shown the high potential academics see in learning from each other. This potential is not achieved in these less supportive teaching groups and further, individual academics, at times, suffer from the negativity of their surroundings.

Among all the factors that challenge teaching in higher education, this research has identified the role of management as the important target area. Where the leaders on the various management levels do not meaningfully demand engagement with learning about teaching, initiatives fail and engagement stays low. Where the leaders do not follow up when teaching is below standard, individuals will not improve their teaching and negative effects for their teaching groups are

apparent. University management carries a key role for improvements in engagement with teaching and with learning about teaching. An important contribution of this research is to suggest that teaching groups, acknowledged in their existence by management, can provide the sector with a meaningful context for improvements in teaching, with benefits to be experienced by individuals and teaching groups as a whole.

The final key contribution of this research to be highlighted refers to the strong findings about the motivation of participating academics. There was widespread support for being intrinsically motivated to invest effort into teaching, led by a desire to impact on student learning. There was also strong support for the motivating forces stemming from feedback received from both students and colleagues. The high levels of intrinsic motivation and the importance assigned to feedback suggest that an approach to increase engagement based on teaching groups, especially if these can be transformed into communities, provides a promising route.

7.3 Limitations of this Research

This research was conducted using a mixed methods approach. As indicated in the section on legitimation for mixed methods research (see Section 3.3.4) such research poses high demands on the researcher who has to be expert in both qualitative and quantitative approaches and has to have the ability to move between the paradigms. In response, it is suggested to work in research teams to provide for specialisation as well as give the required checks and balances. This research was conducted by a single researcher supported only by the feedback as provided within the parameters of doctoral study. Conducting the same research with a research team would have provided for richer sharing and might have allowed teasing out more of the complexities inherent in studies involving mixed methods.

A further limitation of this research is related to the scope of focus groups and surveys. Both research steps were conducted at only one, the same, university. While a substantial number of academics participated in the focus groups and the survey attracted a good return rate, there are limitations in generalising the research findings to a wider context such as higher education in New Zealand. Ideally, this research would have been carried out with participants from multiple universities. Yet, time and resources available did not allow for that. While

involving participants from only one institution impacts on the generalisability of findings, the argument can be made that the university chosen offers enough variety to provide a richness in the data collection that will allow for careful generalisations beyond the boundaries of this university. As the literature review has shown, challenges facing universities and academics are systemic for the higher education sector. This allows for the assumption that fundamental issues, such as the tensions between research and teaching, are affecting all academics. While institutional differences will have some impact, the shared concerns seem to be dominant.

The research participants were self-selected and might not be representative. Focus group invitations were sent to 400 academics, selected randomly from a list of all academics at the University. Ultimately, thirty academics participated in the focus groups. Considering that focus group participation requires a substantial time commitment, it is possible that these academics have a higher level of interest in teaching than others who did not volunteer. After exclusion of individuals with potential conflict of interest, all academics of the University were sent survey invitations. Thirty percent of these academics chose to participate. While the data collected indicate consistency across the waves of participation, the participation rate still leaves the possibility of a non-representative sample.

This research has focused on individual accounts of teaching groups. In the focus groups, the identities of the participants were known to the researcher. With the exception of two cases, the participants were located in different areas of the University and were the only members of teaching groups discussed. In the survey, it is likely that several participants will have provided data for the same teaching groups. Yet, due to the anonymity of the participants, it is not possible to create connections between teaching groups discussed. This means, that for both the focus group and survey research phases, the categorisation of teaching groups is based on the statements of individual members. This represents a limitation of the research, as it did not allow cross-referencing between data on the same teaching groups.

In the survey, participants were instructed to focus on just one of the teaching groups they belong to. The selection of the teaching group was left to the participants. It is not known what selection criteria the participants will have applied. Leaving this decision to the participants and focusing only on one teaching group

per participant will have had some impact on the research. This impact cannot be specified by the researcher.

7.4 Future Research Directions

This research has created a number of directions for future research. Section 7.3 outlines the limitations of this research, which all could be addressed by future research. It would be valuable to involve participating academics from a wider range of institutions in follow up research. This would open up the possibility to generalise findings. Further, one could concentrate on selected teaching groups and involve all members of these groups in data collection. This would allow gaining better understanding of the teaching groups and facilitate research into different perceptions that might be held by teaching group members. Also, attention could be paid to all teaching groups a participant belongs to. For example, one could investigate if these teaching groups complement each other and if cross-fertilisation across the groups can be achieved. Such research work would also allow further development of the survey into a robust instrument. Extended research on teaching groups should revisit the definition of membership. This research focused on academics only. Ultimately, it would be essential to consider everyone related to teaching, inclusive of non-academic teaching and support staff.

The research presented has not investigated the reasons why certain teaching groups are tight-knit, functioning or individualistic. The research has looked at structural composition of teaching groups and at college affiliation, yet has not found significance in these factors. Some potential reasons were mentioned by focus group participants, for example, pressures on a group from a threat of redistribution of teaching, but these have not been followed up. An investigation on why teaching groups show certain characteristics would be valuable, in the light of improving understanding, and, towards development of interventions for shifting teaching groups along the scale towards the tight-knit end.

Once improved understanding is achieved, interventions that help teaching groups to develop into communities should be designed and implemented. This might involve revisiting examples of successful (faculty) learning communities to

identify important factors. Special attention should be paid to motivate teaching group members so they will take ownership and work towards a programme tailored to the specific needs and goals of their groups.

7.5 Implications for Practice and Recommendations

This research has captured many positive aspects about teaching in higher education. It has established how intrinsically motivated many academics are to work hard on improving their teaching and to support student learning. It has provided insights into highly collegial groups of academics, who have formed teaching related communities, where individuals feel well supported and work together constructively. Yet, the research has also shown that a considerable number of academics work in isolation or in highly critical and non-supportive environments. Some of these academics suffer on a personal level and overall opportunities to improve teaching are lost.

There are two main implications for the practice of teaching in higher education. First, institutions need to gain a better understanding and appreciation of the positive aspects around teaching in their institutions. This will help to reward groups or individuals which in turn will contribute towards counteracting the perception among academics that teaching excellence receives little recognition. Second, institutions need to implement measures to address the negative aspects around teaching, perceived and experienced by a substantial number of academics. Such measures will need to include raising the value of teaching, real support by university management and a real concern for teaching quality that not only rewards excellence but is serious about addressing weak teaching.

Teaching groups appear to be a promising approach to facilitate the professional development of academics in teaching. The recommendation to institutions is to find out what teaching groups are present in their institutions and at what level these teaching groups operate. Programmes should then be instigated that help teaching groups to examine needs, define goals and decide on steps for working towards these goals. Teaching groups should be supported by academic developers who can provide guidance, insight into theories and access to supporting material.

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Appendices

Appendix A

Investigation on Teaching Qualifications

To obtain a clearer insight into the uptake of formal academic development programmes, the researcher of this thesis has analysed official staff listings provided by three New Zealand universities as part of their official Calendars. Access occurred in October 2011 to 2011 University Calendars. In these documents, academic staff are listed with their unit affiliations, job titles and formal qualifications. Based on a visual inspection, entries from assistant lecturers to professors, as well as tutors and senior tutors were counted. These counts were set in relation to counts of teaching qualifications for these staff.

A wide variety of acronyms is used for teaching qualifications, and the approach taken was to count any qualifications on certificate, diploma or higher levels that seem to relate to teaching or higher education, inclusive of specialist qualifications in second language teaching. Staff in education colleges or departments were excluded from this exercise, based on the assumption that the base degrees of these staff would already be in education or teaching.

Victoria University of Wellington[1] is a traditional research intensive university. The analysis of the university's calendar[2] (excluding the departments of Education Policy and Implementation, and Educational Psychology and Pedagogy) resulted in a value of 5.7 % for academic staff with teaching qualifications. Massey University[3] has three physical campuses and is New Zealand's traditional

[1] http://www.victoria.ac.nz
[2] http://www.victoria.ac.nz/home/study/calendar.aspx
[3] http://massey.ac.nz

distance provider in higher education. The value for Massey University based on calendar data[4] (excluding the College of Education) is 10.6 % for academic staff with teaching qualifications. AUT University[5] is New Zealand's newest university. It has developed from an institute of technology and has only in 2000 obtained university status. The figure calculated for AUT University based on calendar data[6] (excluding the School of Education) is 25.9%.

The other New Zealand universities are traditional research intensive universities like Victoria University of Wellington. Therefore, the assumption is made that the figures for these other universities would be close to the percentage established for Victoria University of Wellington. Due to its distance education focus Massey University has traditionally had a stronger focus on teaching. This could explain the higher percentage for this university. A substantial number of academics currently employed at AUT University would have started in the times as institute of technology. Such institutes have a stronger focus on teaching than universities. Overall, the number of academics in non-education disciplines with formal teaching qualifications seems fairly low, matching the level of participation indicated in the literature.

[4] http://www.massey.ac.nz/massey/about-massey/university-management/avc-academic/university-dates/mucalendar-staff-listing.cfm

[5] http://www.aut.ac.nz

[6] http://www.aut.ac.nz/about-aut/university-publications#Academic_calendar

Appendix B

Focus Group Invitation Email

Subject: Research on learning about teaching driven by teaching groups – Invitation to participate in focus groups

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Dear academic colleague,

My name is Eva Heinrich. I am a senior lecturer in computer science at Massey University and also an EdD student at the College of Education, Massey University. I am conducting this research in my role as a doctoral student. My supervisors are Dr Linda Leach, A/Prof Nick Zepke and Dr Alison Sewell, who are all from the School of Educational Studies at Massey University.

I am inviting you to participate in focus groups for a research project investigating the role teaching groups could play in facilitating informal learning about teaching by academics in universities. This invitation has been sent to a selected group of academics at *[institution]*.

One particular motivation for this project is to explore approaches for developing teaching knowledge and skills that work for individual academics and are compatible with academic culture. Such approaches might form an alternative to schemes suggested by the government or university leadership.

Please see the attached information sheet for more details.
Kind Regards
Eva Heinrich

Please fill out the following before replying

Email template to express interest in participation

I am interested in participating in your focus groups.

My subject area is *[please insert]*

I am employed at *[institution]* as *[please insert academic rank]*

My home campus is *[campus]*

Looking back over the last two years, I estimate my focus as follows *[please enter percentages, adding up to 100]*:

% on research % on teaching % service

Please indicate which sessions you could attend (you will only be asked to attend one session but please state all possible to assist with scheduling).

[List of suggested dates and locations …]

Appendix C

Survey Invitation Email

Subject: Research on learning about teaching driven by teaching groups - Invitation to participate in a survey

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Dear academic colleague,

My name is Eva Heinrich. I am a senior lecturer in Computer Science at Massey University and also an EdD student at the College of Education, Massey University. I am conducting this research in my role as a doctoral student. My supervisors are Dr Linda Leach, A/Prof Nick Zepke and Dr Alison Sewell, who are all from the School of Educational Studies at Massey University.

I am inviting you to participate in a survey, conducted via an online questionnaire, for a research project investigating the role teaching groups could play in facilitating informal learning about teaching by academics in universities.

I estimate that it will take 10 - 15 minutes to complete the survey.

Here is a link to the survey:
https://www.surveymonkey.com/s.aspx?...

This link is uniquely tied to this survey and your email address. Please do not forward this message.

Kind Regards,
Eva Heinrich

e.heinrich@massey.ac.nz

Please note: If you do not wish to receive further emails regarding this survey, please click the link below, and you will be automatically removed from the mailing list.
https://www.surveymonkey.com/optout.aspx?...

Appendix D

Focus Group Information Sheet

MASSEY UNIVERSITY
COLLEGE OF EDUCATION
TE KUPENGA O TE MĀTAURANGA

Informal Learning about Teaching in Higher Education in Teaching Group Contexts – Focus Groups

INFORMATION SHEET

Researcher's Introduction

My name is Eva Heinrich. I am a senior lecturer in computer science at Massey University and also an EdD student at the College of Education, Massey University. I am conducting this research in my role as a doctoral student. My supervisors are Dr Linda Leach, A/Prof Nick Zepke and Dr Alison Sewell, who are all from the School of Educational Studies at Massey University.

Project Description and Invitation

This research project investigates the role teaching groups could play in facilitating informal learning about teaching by academics in universities. A teaching group is formed by members of a university who teach in the same subject area or teach into the same degree programme. The intention of the research is to explore approaches for developing teaching knowledge and skills that work for individual academics. The background to my interest in this research is that numerous opportunities exist for learning about teaching yet many academics do not take advantage of these opportunities.

The research will be undertaken as a mixed method study. The invitation to participate expressed in this information sheet applies to the focus group part of the study.

Participant Identification and Recruitment

A selection of members of academic staff at [redacted] is invited to participate (see exclusion criteria below).

I am inviting you to express your interest in participation by emailing me (e.heinrich@massey.ac.nz).

I will make a selection among interested participants based on achieving the following criteria:

- Wide spread across the subject areas taught at [redacted]
- Even distribution across the focus of academics on research, teaching and service;
- Even distribution across academic seniority levels;
- Manageable logistics across [redacted]

To avoid conflicts of interest I will exclude [redacted]

I am aiming to conduct up to eight focus groups with about five participants each.

Project Procedures

Your participation would involve responding to research questions posed by me and engaging in discussion on issues arising in the focus group setting.

The focus group sessions will be held face-to-face at the campuses of [redacted] You would participate at your home campus. Each session will be concluded within 90 minutes.

I intend to schedule the focus group sessions in the time from 30 August to 24 September 2010.

Please be aware that participation in a focus group session will mean that the other academics present will hear what you will say (each participant will have to sign a confidentiality agreement before commencement of the focus group session).

Please note that participation in the focus groups is subject to agreeing that these sessions will be audio recorded.

Data Management

The focus group sessions will be audio recorded. The audio recordings obtained will be transcribed and analyzed. Participants can ask for copies of the transcripts. Pseudonyms will be inserted before transcripts are supplied.

Audio recordings, transcripts and research analysis and findings will be kept password protected on Massey University computers used by me. The signed consent forms will be put into lockable storage under control of my supervisors.

The data will be stored for five years and will then be destroyed.

All reporting on findings will protect your identity. Please be aware that it might be possible for someone with good institutional knowledge of [redacted] to infer the identity of a participant.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study (before or during your scheduled focus group session, or up until the time data analysis has begun);
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.

Project Contacts

Researcher: Eva Heinrich
AgHort 3.70, Turitea, Massey University
06-3569099, ext. 2466
e.heinrich@massey.ac.nz

Main Supervisor: Dr Linda Leach
[redacted]
l.j.leach@massey.ac.nz

Please feel free to contact either myself of my supervisors with any questions regarding this project.

"This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 10/16. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz."

Appendix E

Survey Information Sheet

Informal Learning about Teaching in Higher Education in Teaching Group Contexts

INFORMATION SHEET

Researcher's Introduction

My name is Eva Heinrich. I am a senior lecturer in Computer Science at Massey University and also an EdD student in the College of Education, Massey University. I am conducting this research in my role as a doctoral student. My supervisors are Dr Linda Leach, A/Prof Nick Zepke and Dr Alison Sewell, who are all from the School of Educational Studies at Massey University.

Project Description and Invitation

This research project investigates the role teaching groups could play in facilitating informal learning about teaching by academics in universities.

Participant Identification and Recruitment

Selected members of academic staff of [redacted] are invited to participate. The selection is based on job titles and includes all academics under the selected job titles.

Project Procedures

The survey is provided electronically. No information about your identity will be recorded. Answering the questions should take about 10 to 15 minutes of your time. Filling out the questionnaire will imply consent.

Data Management

The questionnaire data, research analysis and findings will be kept password protected on computers.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- be given access to a summary of the project findings when the project is concluded (please contact the researcher and provide your email address so the summary can be sent to you).

Project Contacts

Researcher: Eva Heinrich, AgHort 3.70, Turitea, Massey University, 06-3569099, ext. 2466, e.heinrich@massey.ac.nz

Main Supervisor: Dr Linda Leach, [redacted]

Please feel free to contact either myself of my supervisors with any questions regarding this project.

"This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 10/16. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz."

Appendix F

Questions for Focus Group Sessions

Question category	**Questions**
Opening question	Tell us who you are, what your subject area is, and what you enjoy most about being an academic.
Introductory questions	How do you interact with others in regard to learning about teaching? In learning about teaching do you interact mostly with direct colleagues, colleagues from the wider university or others from outside the university? How well does my definition of a teaching group fit for you? How is the teaching group you belong to composed?
Transition questions	What interaction in terms of teaching development is happening between the members of your teaching group? How is such interaction facilitated? How do the members of the teaching group participate?
Key questions	What are your perceptions about the quality of the teaching in your teaching group? To which degree does this quality matter to you? What roles could teaching groups play in facilitating learning about teaching? What needs to happen in universities to encourage learning about teaching in teaching groups? How could one encourage reluctant members of a teaching group to participate in exchange about teaching? What effort would you be prepared to invest into the interaction in your teaching group?
Closing question	Give a one minute statement on what you would see as the ideal interaction in your teaching groups for learning about teaching.

Appendix G

Summary of Focus Group Findings

Summary of Findings of Focus Groups on 'Learning about Teaching Driven by Teaching Groups'

Demographics

Thirty academics participated in the focus groups on 'learning about teaching driven by teaching groups' conducted in September 2010. All [university name] campuses and colleges (plus one university centre) were represented.

The distribution of participants across academic ranks roughly matched the total population of [university name] academics (professors were slightly underrepresented in this study whereas associate professors were slightly overrepresented).

Participants' Estimates on Research, Teaching and Service

The participants were asked to estimate their focus on research, teaching and service over the last two years. Table 1 shows the percentages. No comparison numbers are available for the university.

Table 1

Description of Group	Number of Participants	% Research	% Teaching	% Service
All participants	30	24	52	24
Participants without teaching only roles or programme leadership roles	20	32	48	20
Participants with teaching only positions	5	4	87	9
Participants with explicit roles in programme leadership	5	13	35	52

Teaching Groups of Participants

The original definition of teaching groups suggested by the researcher was extended in response to how participants reported their groups' teaching focus and organizational structure. Table 2 provides counts to show where the participants located their groups (several participants identified more than one teaching group).

The largest concentration of teaching groups is where academics from one single subject area see themselves as teaching into one single subject area. This is followed by teaching groups where academics from one organizational unit with a multi-disciplinary focus teach into one degree or specialisation within a degree.

Table 2

Teaching focus/Organizational structure	Specific paper	Single subject area	One degree/specialisation within degree	Multiple subject areas/degrees
One unit, single subject area	3	12	0	1
One unit, multi-disciplinary focus	0	0	7	1
Multiple units	3	3	3	2

Characteristics of Teaching Groups

Analysis of the participants' comments on the characteristics of their teaching groups led to identification of parameters and to a classification of teaching groups based on values assigned to these parameters. Two distinct teaching group types emerged and were labelled as 'Individualistic' and 'Tight-Knit'. The parameter values are seen as sitting on a continuum. Table 3 shows the parameters and the ends of the value spectra associated with individualistic versus tight-knit teaching groups.

Using these parameters ten teaching groups presented in this study were identified as individualistic and ten as tight-knit. Four teaching groups were seen as sitting in the middle of the spectrum and for the remaining teaching groups not enough information was available to make a classification.

Based on the value participants assign to the interaction with others and the atmosphere required to facilitate meaningful interaction with others it seems that tight-knit teaching groups are more beneficial for teaching than individualistic teaching groups.

Table 3

Parameters	**Individualistic towards Tight-Knit Teaching Groups**
Participation of teaching group members in events organized for whole group	Low ↔ High
Proportion of teaching group members who initiate interactions about teaching with other members of the teaching group	Low ↔ High
By chance interaction among teaching group members	Little ↔ Lots
Interactions that focus on how to teach	Little ↔ Lots
Interactions that focus on improvements of teaching	Little ↔ Lots
Trusting and open atmosphere within teaching group	Low ↔ High
Reserved and protective atmosphere within teaching group	High ↔ Low
Perception that importance of teaching ranks behind research	High ↔ Low
Teaching group members are motivated to provide best teaching possible	Low ↔ High

Factors in Development of Teaching Group Characteristics

Several factors were revealed that explain why some teaching groups are more tight-knit than others. External pressures and the struggle to survive as unit can bring academics together. Some groups benefit from a teaching background or an origin in a teaching culture. Curriculum redevelopments, introduction of new e-learning systems, teaching expertise or special funding can contribute to closer relationships within groups. Strong leaders who lend real support to teaching initiatives have an important influence.

Challenges for the development of tight-knit teaching groups are built into many aspects of university life. One key factor is the dominance of research over teaching. Research performance can be better measured than teaching performance. Research excellence is higher rewarded, in promotions, general recognition in the academic community and at the start of an academic career in the appointment process. A general lack of learning about teaching is both a contributing factor and a consequence of individualistic teaching groups and an academic system with little emphasis on teaching excellence.

Moving Towards Next Research Phase

Based on the findings of the focus group research phase a number of goals and hypotheses have been identified for the next research phase which will be conducted in form of a questionnaire sent to all academic staff at [university name], scheduled for weeks 2 and 3 of semester 2 in 2011.

Appendix H

Summary of Survey Findings

Summary of Findings of Survey on 'Learning about Teaching Driven by Teaching Groups'

Demographics

The survey reached a participation rate of 30%. Looking at gender, job titles and college affiliation, the demographics of the participants matched the demographics of the target population closely.

86% of participants were employed full-time, 82% were in positions that require them to undertake research.

The averages of time spent by participants on research, teaching and service were given as 29%, 53% and 18%, respectively.

Findings related to question 'Do academics belong to teaching groups?'

- Close to 95% of participants belong to at least one teaching group.
- About 40% of participants belong to just one teaching group, about 30% to two, about 20% to three, about 10% to four or more.
- About 75% of teaching groups have up to 10 academic members.
- Just over half of teaching groups stretch over multiple locations.
- All combinations of organisational units and teaching focus of teaching groups occurred and no strong pattern emerged.

Findings related to question 'What happens in teaching groups?'

- By-chance interaction (average 3.11 out of 5) is more frequent that interaction in meetings (average 2.58).
- Participation of most members of a teaching group (average 3.46) is higher than initiation of interaction by most members (average 3.07).
- Across all teaching groups the interaction levels sit on the neutral point in the scale provided (calculated across the four questions relating to interaction) with a standard variation of 1.11.
- Over 60% of teaching groups have a trusting and open atmosphere; only under 15% do not.
- With 95% agreement or strong agreement there is strong support among participants that an open and trusting atmosphere facilitates constructive interaction on teaching.
- With 95% agreement or strong agreement the majority of participants regards an open and trusting atmosphere as necessary for constructive interaction on

teaching.
- More than 95% of participants have experienced interactions with colleagues that have had positive impact on their teaching.
- More than 30% of participants have experienced interactions with colleagues that have had negative impact on their teaching. Many participants have commented to illustrate their experiences. Some participants have felt strong negative impact on their teaching and on themselves as persons.

Findings related to question 'How can teaching groups be characterised?'

- A scale of 'desirability' for teaching groups was developed. This ranged from 'individualistic' (index 1) to 'tight-knit' (index 5) teaching groups, with tight-knit teaching groups being seen as more supportive of learning about teaching. The mean teaching group index is at 3.22.
- No relationship was found between teaching group indices and organisational structure and teaching focus of teaching groups.
- 65% of participants agree or strongly agree that their teaching groups show characteristics that facilitate high quality teaching.
- 60% of participants agree or strongly agree that the quality of teaching in their teaching groups is high. The statements on quality made by participants are highly correlated to the teaching group indices calculated.
- 75% of participants agree or strongly agree that teaching quality would benefit from closer interaction on teaching.
- 65% of participants agree or strongly agree with the need for improving the teaching quality at the university.

Findings related to question 'What Factors outside Teaching Groups Influence Engagement with Teaching and Learning about Teaching?'

- Close to 100% of participants care about the quality of teaching in their teaching groups.
- 70% of participants agree or strongly agree that their teaching groups show a desire to improve teaching and that their teaching group colleagues value teaching highly.
- 75% of participants are encouraged to work on improving their own teaching when being surrounded by high quality teaching.
- 85% of participants think they can learn about teaching from interacting with colleagues.
- 85% of participants think they can help their colleagues to learn about teaching.
- 95% of participants agree or strongly agree to being intrinsically motivated to put effort into teaching.
- With 35% agreement the power of extrinsic motivation is low.
- With 99% and 95% agreement the effects of impact on motivation from student learning and student feedback are very strong.

- The value colleagues assign to teaching (55% agreement) and the feedback received from colleagues (60% agreement) are also strong motivators.
- The value for promotion (just above 35% agreement) and the value heads of sections put on teaching (40% agreement) are fairly low motivators for participants).
- Participants rate the leadership for teaching they receive from the university management as fairly low, with percentages ranging from under 10% to just under 35%. There is substantial agreement (70%) that colleagues provide effective leadership. A considerable number of participants (45%) agree that others outside the university provide effective leadership.

Appendix I

Survey Questions

The following pages show the survey webpages as presented to participants via SurveyMonkey. Consecutive question numbers have been added for easier reference in the body of the thesis.

Understanding of 'Teaching groups'

Based on our positions as academics we belong to one or more groups in relation to teaching.

Such groups can be characterized by looking at:

- How the membership is composed in terms of organizational unit;
- If the members come from one or multiple disciplines;
- If the members teach into one paper, subject area or programme.

Such groups are referred to as 'teaching groups' in this survey.

Examples for teaching groups might be:
Academics in a Finance department teach Finance papers across a range of programmes.
Academics from various departments teach the Media Studies major of a BA.
A subgroup of academics within an English department teaches a paper on Written Communication.
Engineers, Microbiologists and Chemists who are in one department teach into the Food Technology degree.

Q1

1. I can relate the suggested understanding of 'teaching groups' to my situation.

◯ Yes

◯ No (please explain)

Teaching Group Composition

Q2

1. I belong to the following number of teaching groups.

- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four or more

If you belong to more than one teaching group ***please choose one*** *of these teaching groups to answer the following questions.*

Q3

2. The following best describes the organizational structure of my teaching group.

- ◯ The members of my teaching group are in the same organizational unit and are in the same discipline
- ◯ The members of my teaching group are in the same organizational unit but are from different disciplines
- ◯ The members of my teaching group are from different organizational units
- ◯ Other (please specify)

Q4

3. The following best describes the teaching focus of my teaching group.

- ◯ My teaching group teaches one specific paper
- ◯ My teaching group teaches in a single subject area
- ◯ My teaching group teaches into one specific degree (or specialization within a degree)
- ◯ My teaching group teaches into multiple subject areas or degrees
- ◯ Other (please specify)

Q5

4. My teaching group has the following number of academic members.

- ◯ 5 or less
- ◯ 6 to 10
- ◯ 11 to 20
- ◯ more than 20

Q6

5. My teaching group has members at multiple campuses/sites.

- ◯ Yes
- ◯ No

Q7

6. Compared to the other locations, on my campus/site there are

- ◯ more members
- ◯ about the same number of members
- ◯ fewer members
- ◯ (not applicable)

Teaching Group Characteristics

Please continue to answer thinking of the same teaching group.

Q8

1. Meetings about teaching are frequent in my teaching group.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Q9

2. Chance interactions about teaching are frequent in my teaching group.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Q10

3. Most members of my teaching group initiate interactions about teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Q11

4. Most members of my teaching group participate in teaching related events.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Q12

5. My teaching group demonstrates a desire to improve teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Q13

6. The atmosphere in my teaching group is trusting and open.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q14

7. Teaching is valued highly among the members of my teaching group.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q15

8. My teaching group shows characteristics that facilitate high quality teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q16

9. I care about the quality of teaching in my teaching group.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q17

10. I am encouraged to work on improving my teaching if my colleagues around me provide high quality teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q18

11. I am well informed about the teaching of my colleagues in my teaching group.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q19

12. The quality of teaching in my teaching group is high.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

About the Individual Academic

Please answer the following questions independently from any teaching groups you might belong to.

Q20

1. Interacting with colleagues on teaching has had a positive impact on my teaching.

	Never	A few times	Many times
Answer	◯	◯	◯

Q21

2. Interacting with colleagues on teaching has had a negative impact on my teaching.

	Never	A few times	Many times
Answer	◯	◯	◯

Comment

Q22

3. I can learn about teaching from interacting with colleagues.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Q23

4. I can help my colleagues to learn about teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

5. I experience effective leadership with regard to teaching.

Q24

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a	From the university senior leadership team	○	○	○	○	○
b	From my College PVC	○	○	○	○	○
c	From my College Teaching and Learning Director	○	○	○	○	○
d	From my head of section (e.g., HOD, HoI, HoS)	○	○	○	○	○
e	From my teaching group leader	○	○	○	○	○
f	From teaching consultants	○	○	○	○	○
g	From colleagues	○	○	○	○	○
h	From others outside the university	○	○	○	○	○

Other (please specify)

Q25

6. An open and trusting atmosphere facilitates constructive interaction on teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q26

7. An open and trusting atmosphere is necessary for constructive interactions on teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q27

8. The effort I put into my teaching is driven by intrinsic motivation.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q28

9. The effort I put into my teaching is driven by extrinsic motivation.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q29

10. The following are important for me to invest effort into my teaching.

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a	Value teaching has for promotion	○	○	○	○	○
b	Value my head of section (e.g., HoD, HoS, HoI) puts on teaching	○	○	○	○	○
c	Value my colleagues put on teaching	○	○	○	○	○
d	Feedback I receive from colleagues	○	○	○	○	○
e	Feedback I receive from students	○	○	○	○	○
f	Impact I have on student learning	○	○	○	○	○

Other

Q30

11. I think that teaching quality would benefit from closer interaction of academics on teaching.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	○	○	○	○	○

Q31

12. I see a need to improve teaching quality at this university.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Answer	◯	◯	◯	◯	◯

Demographics

Q32

1. I belong to the following College (or other unit)

- ◯ College of Business
- ◯ College of Education
- ◯ College of Sciences
- ◯ College of Creative Arts
- ◯ College of Humanities & Social Sciences
- ◯ Other Unit

Q33

2. I am a

- ◯ Assistant Lecturer
- ◯ Professor
- ◯ English Language Teacher
- ◯ Lecturer
- ◯ Graduate Assistant
- ◯ Senior English Language Teacher
- ◯ Senior Lecturer
- ◯ Tutor
- ◯ Other
- ◯ Associate Professor
- ◯ Senior Tutor

Q34

3. I am employed

- ◯ Half-time or less
- ◯ Between half- and full-time
- ◯ Full-time

Q35

4. I am

- ◯ Female
- ◯ Male

Q36

5. Looking back over the last two years, I estimate my focus as follows (please enter percentages, adding up to 100):

- Research
- Teaching
- Service

Q37

6. My position requires me to do research

- ◯ Yes
- ◯ No

Q38

7. A significant part of my role relates to leadership in a teaching programme

- ◯ Yes
- ◯ No

End of Survey

Q39

1. Do you have any comments?

Thank you for filling out this survey.

If you would like access to a summary of the survey findings please contact the researcher, Eva Heinrich (e.heinrich@massey.ac.nz).

Appendix J

Teaching Groups with Subject Focus

Sorted by structural characteristics, the following lists the teaching groups of focus group participants with subjects taught.

One unit, single subject area — Specific course

- Groups of tutors teaching academic writing and writing for sciences
- Tutors and lecturer teaching communication in sciences
- Tutors and lecturer teaching communication skills

One unit, single subject area — Single subject area

- Finance academics teaching finance
- Statistics academics teaching statistics
- Operations management academics teaching operations management
- Physics academics teaching physics
- Accountancy academics teaching accountancy
- Psychology academics teaching psychology
- Marketing academics teaching marketing

- English academics teaching English to second language learners
- Social work academics teaching social work
- Information systems academics teaching information systems
- Social work academics teaching social work
- Banking academics teaching banking

One unit, single subject area — Multiple subject areas/degrees

- Academics in nutrition teaching into food technology and health sciences degrees

One unit, multi-disciplinary focus — One degree/specialisation within degree

- Food technology academics teaching into food technology degree
- Plant science academics teaching into agricultural degrees
- Academics in health sciences teaching into health degrees
- Academics in health sciences teaching into health degrees
- Communication design academics teaching into design degree
- Education academics teaching multiple subjects into primary graduate programme
- Microbiologists, engineers, chemists, applied developers teaching food microbiology into food technology

One unit, multi-disciplinary focus — Multiple subject areas/degrees

- Development studies academics teaching into many different degrees

Multiple units — Specific course

- Education academics teaching into one course
- Academics from multiple areas teaching creative writing
- Education academics teaching into one course

Multiple units — Single subject area

- Academics from Schools of Social and Cultural Studies and from School of English and Media Studies teaching English and Media Studies
- Academics from multiple areas across colleges teaching English as additional language
- Academics from different units teaching microbiology

Multiple units — One degree/specialisation within degree

- Academics from multiple schools teaching into Secondary Teacher Education
- Academics from multiple schools/colleges plus others from outside teaching into the MBA
- Academics from various units teaching into initial teacher education

Multiple units — Multiple subject areas/degrees

- Academics from various science areas and from other colleges teaching into the various science programmes
- Academics from various agriculture areas, academics from other colleges and others from outside the university teaching into various agriculture programmes

Appendix K

Mapping to Teaching Group Types

The following shows the mapping of participants' teaching groups to teaching group types.

*	Indicates that members of teaching group focus on teaching only and do not carry out research;
**	Indicates that the participant had identified two teaching groups which have been combined in this table; in each case the same type was identified for both groups.

Participants' teaching groups (Part 1)

Participant	Type	Confidence	Comment
P7 **	tight-knit *	high	lots of informal interaction, organised if required; talking about pedagogy including review of teaching evaluations; highly cooperative atmosphere
P9	tight-knit *	high	working together is influenced by organised meetings; talk about pedagogy; atmosphere in group is not discussed
P1	tight-knit	high	frequent interactions among group members about teaching including pedagogy
P13	tight-knit	high	lots of informal interaction about all aspects of teaching
P17	tight-knit	high	lots of informal interaction about all aspects of teaching
P25	tight-knit	high	lots of informal interaction
P27	tight-knit	high	lots of informal interaction
P4	tight-knit	high	level of interactions; emphasises collegiality and trust
P6	tight-knit	high	both informal and organised interaction about teaching, including review of teaching evaluations
P22	tight-knit *	low	informal interaction with exchange about pedagogy; also organised events
P11	functioning	high	organised interactions across group with largely focus on organisational matters but as well shared efforts to make teaching good and subject area attractive
P8	functioning	high	organised interactions across group; more interaction, including review of teaching evaluations and mentoring at sub-group level
P23 **	functioning	low	informal interaction; would need more information for high confidence rating
P26	functioning	low	both informal and organised interaction about teaching; as teaching group is seem as very wide there are likely to be variations in subgroups
P10	individualistic	high	interactions on sub-group level within teams who teach course on organisation matters
P12	individualistic	high	members of the teaching group behave individualistic; there are no structures to encourage interaction

Participants' teaching groups (Part 2)

Participant	Type	Confidence	Comment
P14	individualistic	high	little interaction across teaching group; more interaction in course-based subgroups and with individuals
P16	individualistic	high	there is little interaction involving the whole teaching group that spans campus boundaries
P18	individualistic	high	emphasises the lack of interaction on teaching, both informal and organised
P19 **	individualistic	high	there is some level of organised interaction but overall very little
P2	individualistic	high	very little interaction in group, only when forced, e.g., when handing over course; little value of teaching
P29	individualistic	high	very little interaction in group
P3	individualistic	high	very little interaction in group; little value of teaching
P20	individualistic	low	interactions are centred around the individual; more difficult to assess as teaching group of participant is not very homogeneous
P21	(not enough information)		participant talks mostly about themselves; not enough information about group available
P22	(not enough information) *		not enough information provided by participant on teaching group
P15	(not enough information)		not enough information provided by participant on teaching group
P24	(not enough information)		not enough information provided by participant on teaching group
P28	(not enough information)		not enough information provided by participant on teaching group
P30	(not enough information)		not enough information provided by participant on teaching group
P5	(not enough information)		participant is involved in a range of areas; not enough information on specific group identified as teaching group

Appendix L

Answers to Survey Questions 1 to 7

The following pages show the answers to survey Questions 1 to 7.

Answers to Q1: I can relate the suggested understanding of 'teaching groups' to my situation

Answer Option	**Number**	**Percentage (out of 320 answers)**
Yes	302	94.38
No	18	5.63

Answers to Q2: I belong to the following number of teaching groups

Answer Option	**Number**	**Percentage (out of 277 answers)**
One	114	41.16
Two	78	28.19
Three	57	20.58
Four or more	28	10.11

Answers to Q3: The following best describes the organisational structure of my teaching group

Answer Option	**Number**	**Percentage (out of 278 answers)**
The members of my teaching group are in the same organisational unit and are in the same discipline	137	49.28
The members of my teaching group are in the same organisational unit but are from different disciplines	80	28.78
The members of my teaching group are from different organisational units	51	18.35
Other (please specify)	10	3.60

Answers to Q4: The following best describes the teaching focus of my teaching group

Answer Option	**Number**	**Percentage (out of 278 answers)**
My teaching group teaches one specific course	57	20.50
My teaching group teaches in a single subject area	72	25.90
My teaching group teaches into one specific degree (or specialisation within a degree)	74	26.62
My teaching group teaches into multiple subject areas or degrees	70	25.18
Other (please specify)	10	3.60

Answers to Q5: My teaching group has the following number of academic members

Answer Option	**Number**	**Percentage (out of 279 answers)**
5 or less	111	39.78
6 – 10	98	35.13
11 – 20	50	17.92
More than 20	20	7.17

Answers to Q6: My teaching group has members at multiple campuses/sites

Answer Option	**Number**	**Percentage (out of 277 answers)**
Yes	148	53.43
No	129	46.57

Answers to Q7: Compared to the other locations, on my campus/site there are ...

Answer Option	**Number**	**Percentage (out of 148 answers)**
More members	78	53.06
About the same number of members	37	25.17
Fewer members	27	18.37
Not applicable	5	3.40

Appendix M

Significant ANOVA Results for Question 37

This appendix contains the detailed tables for questions with significant ANOVA results for Question 37 to support the cross-referencing of survey findings with demographics presented in Section 5.5.

Influence of having research obligations on frequency of meetings in teaching group

Options Question 37	**Number of answers to all relevant questions**	**Average Question 8**
All	284	2.58
Yes	232	2.48
No	52	2.88

Influence of having research obligations on effective leadership from University senior leadership team

Options Question 37	**Number of answers to all relevant questions**	**Average Question 24a**
All	284	2.24
Yes	232	2.15
No	52	2.67

Influence of having research obligations on effective leadership from college leader

Options Question 37	**Number of answers to all relevant questions**	**Average Question 24b**
All	284	2.14
Yes	232	2.08
No	52	2.39

Influence of having research obligations on effective leadership from college teaching and learning director

Options Question 37	**Number of answers to all relevant questions**	**Average Question 24c**
All	284	2.50
Yes	232	2.45
No	52	2.79

Influence of having research obligations on the necessity of an open and trusting atmosphere

Options Question 37	**Number of answers to all relevant questions**	**Average Question 26**
All	284	4.34
Yes	232	4.30
No	52	4.54

Appendix N

Significant ANOVA Results for Question 38

This appendix contains the detailed tables for questions with significant ANOVA results for Question 38 to support the cross-referencing of survey findings with demographics presented in Section 5.5.

Influence of having a leadership role in teaching on the frequency of chance interactions

Options Question 38	**Number of answers to all relevant questions**	**Average Question 9**
All	277	3.31
Yes	124	3.48
No	153	3.19

Influence of having a leadership role in teaching on desire of teaching group to improve teaching

Options Question 38	**Number of answers to all relevant questions**	**Average Question 12**
All	277	3.80
Yes	124	4.00
No	153	3.66

Influence of having a leadership role in teaching on the atmosphere in teaching group

Options Question 38	**Number of answers to all relevant questions**	**Average Question 13**
All	277	3.64
Yes	124	3.85
No	153	3.50

Influence of having a leadership role in teaching on value of teaching among teaching group members

Options Question 38	Number of answers to all relevant questions	Average Question 14
All	277	3.81
Yes	124	3.99
No	153	3.69

Influence of having a leadership role in teaching on characteristics of teaching group that facilitate high quality teaching

Options Question 38	Number of answers to all relevant questions	Average Question 15
All	277	3.71
Yes	124	3.90
No	153	3.58

Influence of having a leadership role in teaching on caring about quality of teaching in teaching group

Options Question 38	Number of answers to all relevant questions	Average Question 16
All	277	4.51
Yes	124	4.62
No	153	4.44

Influence of having a leadership role in teaching on quality of teaching in teaching group

Options Question 38	**Number of answers to all relevant questions**	**Average Question 19**
All	277	3.66
Yes	124	3.81
No	153	3.56

Influence of having a leadership role in teaching on ability to help colleagues to learn about teaching

Options Question 38	**Number of answers to all relevant questions**	**Average Question 23**
All	277	4.00
Yes	124	4.16
No	153	3.91

Influence of having a leadership role in teaching on receiving effective leadership from others outside the university

Options Question 38	**Number of answers to all relevant questions**	**Average Question 24h**
All	277	3.24
Yes	124	3.50
No	153	3.00

Influence of having a leadership role in teaching on intrinsic motivation driving effort invested into teaching

Options Question 38	**Number of answers to all relevant questions**	**Average Question 27**
All	277	4.47
Yes	124	4.60
No	153	4.38

Appendix O

Significant ANOVA Results for Question 36

This appendix contains the detailed tables for questions with significant ANOVA results for Question 36 to support the cross-referencing of survey findings with demographics presented in Section 5.5.

Influence of time spent on research on caring about quality of teaching of colleagues

Options Question 36	**Number of answers to all relevant questions**	**Average Question 16**
All	277	4.51
Time on research below average	129	4.60
Time on research above average	148	4.42

Influence of time spent on research on negative impact on teaching from interaction with colleagues

Options Question 36	**Number of answers to all relevant questions**	**Average Question 21**
All	277	1.36
Time on research below average	129	1.43
Time on research above average	148	1.29

Influence of time spent on research on intrinsic motivation to spend effort on teaching

Options Question 36	**Number of answers to all relevant questions**	**Average Question 27**
All	277	4.47
Time on research below average	129	4.57
Time on research above average	148	4.37

Influence of time spent on teaching on negative impact on teaching from interaction with colleagues

Options Question 36	**Number of answers to all relevant questions**	**Average Question 21**
All	276	1.35
Time on teaching below average	155	1.28
Time on teaching above average	121	1.45

Influence of time spent on teaching on intrinsic motivation to spend effort on teaching

Options Question 36	**Number of answers to all relevant questions**	**Average Question 27**
All	276	4.46
Time on teaching below average	155	4.39
Time on teaching above average	121	4.55