A critical systems view of quality assurance in New Zealand universities

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Abstract

The present study uses a critical systems approach to explore quality assurance in New Zealand universities. It combines information from the international and New Zealand literature with findings from a case study university to investigate perceptions of quality and quality assurance at different levels of the New Zealand university system. The research shows that existing approaches to quality assurance have not followed the principles of quality management to improve the core productive enterprise of the organisation. Instead, the approaches have been advanced in agencies outside universities to the point where they now exist in and of themselves, and for purposes that are no longer transparent to those involved or affected by them.

The research addresses a perceived gap in terms of defining academic quality in a manner that acknowledges the purposes of universities and their complexity. Current approaches to quality assurance emphasise financial and activity-based accountability which arguably have little to do with improving the quality of teaching, learning and research. By shifting the focus from 'defining quality' to articulating the relationship between quality assurance, accountability and quality improvement, standardised approaches such as audit, accreditation and performance reporting can be incorporated alongside the more flexible and adaptive approaches required for the improvement of teaching, learning and research within universities.

Insights regarding a clearer pathway for the application of quality assurance in New Zealand universities are outlined. Main issues to be addressed if the quality assurance system is to be improved are related to its purposes, roles and functions, evaluation methodologies and terminology. In particular, there is a need for explicit acknowledgment of the essential role played by the discipline, and the functions of universities and their staff must be better articulated and understood. Improvement of the quality assurance system is also reliant on acceptance of the work already undertaken and its 'messiness'. Improving teaching, learning and research is not a linear, standardised or tidy business. It is a complex process of developing individual and collective capabilities, taking risks, learning from failure and striving to continuously extend success.

Table of Contents

List of Figures

List of Tables

Abbreviations

AUQA	Australian Universities Quality Agency
CUAP	Committee on University Academic Programmes
CST	Critical Systems Thinking
MoE	Ministry of Education
NPM	New Public Management
NZQA	New Zealand Qualifications Authority
NZUAAU	New Zealand Universities Academic Audit Unit
NZVCC	New Zealand Vice-Chancellors' Committee
OECD	Organisation for Economic Cooperation and Development
PBRF	Performance Based Research Fund
QAB	Quality Assurance Body
STEP	Statement of Tertiary Education Priorities
TEAC	Tertiary Education Advisory Commission
TEC	Tertiary Education Commission
TEO	Tertiary Education Organisation
TES	Tertiary Education Strategy
TQM	Total Quality Management
TSI	Total Systems Intervention
VSM	Viable Systems Modelling

Chapter 1: Introduction

'Quality', 'quality assurance' and 'quality improvement' are terms that are used quite frequently in universities but what do they actually mean? Who is responsible for their application? How are they demonstrated? These are some of the questions examined in the following study which investigates different perceptions of quality at different levels of the university system in New Zealand. The context for the study is one where tertiary education reforms led by government and focused on improving accountability and performance appear to reinforce an approach where quality assurance is constructed and implemented at a distance from disciplinary, pedagogical or university-level considerations. A case study involving participants from a typical New Zealand university is used to enhance understanding of information published in the context and in the international literature relating to higher education.

The research begins from a premise that reconciling the fit between quality assurance and universities requires acceptance that quality in universities is systemic and complex, underpinned by local, national and international understandings, and transcending disciplinary, institutional, economic and political boundaries. Therefore different perspectives are required to advance understanding of quality assurance in universities, including assumptions regarding their nature and purposes; and the values and beliefs that operate at various levels of the university system. The socio-political and socio-technical aspects of quality assurance are also important, especially in the context of the power relations that may privilege particular forms of knowledge above others.

Consequently, exploring quality in the university system requires an appreciation of quality management (ideology, tools and methods) that is informed and directed by an appreciation of universities (people, purpose(s), values, structures and processes). The overall purpose of the research is to develop an approach to quality assurance that recognises the nature and purposes of universities, and to provide a clearer pathway for its application. Specifically, the objectives of the study are to:

- investigate, compare and contrast perceptions of quality and quality assurance at different levels of the university system, including the government, the university 'senior management', university 'middle management' and academic staff;
- use systems thinking to examine assumptions regarding the nature and purposes of quality assurance in universities, and to explore and problem solve any conflicting perceptions; and
- develop an approach to quality assurance that recognises the nature and purposes of universities.

The expected outcomes of the research include:

- insights regarding a clearer pathway for the application of quality management in the university system;
- addressing a perceived gap in the literature in terms of defining quality assurance in a manner that acknowledges the purposes of universities and their complexity; and
- testing the use of systems thinking as a framework for exploring quality assurance in universities.

The study is presented in six chapters. Chapter 2 traces the development of quality management through early models of inspection and control to Total Quality Management (TQM) drawing attention to dependencies on people, places and purposes. The discussion then shifts to the implementation of quality management in higher education where questions of people, places and purposes are more opaque. The introduction of quality management is associated with the New Public Management (NPM) reforms of the 1980s and the suggestion is made that little has changed in its conception or application since that time, despite calls for change. These more general observations are then situated in the New Zealand context which provides a specific setting for the development of the thesis. The introduction and evolution of quality management within the New Zealand tertiary education sector is outlined as a pre-cursor to the objectives and expected outcomes of the research presented at the conclusion of the Chapter.

Chapter 3 outlines the design and implementation of a 'critical systems approach' to the present study of quality in universities beginning with a brief overview of Systems Thinking and the evolution of Critical Systems Thinking (CST). The core themes of CST are presented and the cardinal principles of Total Systems Intervention (TSI)—as a metamethodology underpinning CST—are discussed. Justification of the research design is provided and the procedures for data collection and the application of systems methods are described.

Chapter 4 explores the context for the study—higher education and information relevant to the New Zealand context—within a framework provided by systems windows (meaning, structure, process and knowledge/power) using findings from the literature, the case study, and the application of systems tools (e.g., metaphor analysis, boundary critique) to investigate the nature and purposes of universities. The Chapter illustrates how universities strive to balance the needs of different interest groups while advancing their mission of advanced learning through knowledge creation, preservation and transmission. The processes and functions of particular elements within the university system (academic staff, academic units, universities, and government agencies) are described and findings from the case study provide a localised perspective on the broader views canvassed in the literature.

Chapter 5 investigates quality assurance at different levels of the university system using systems thinking to examine assumptions regarding its nature and purposes. Multiple perspectives of quality assurance are also reviewed using the same framework applied in Chapter 4. Definitions of quality assurance and improvement are proposed that demonstrate how a strong bias toward accountability is counterproductive to the improvement of teaching and learning. Roles and functions in relation to quality assurance at different levels of the university system are examined, and areas of overlap and confusion are revealed. Finally, processes and methods that support quality assurance and improvement are investigated with reference to audit and accreditation as well as teaching, learning and research.

The final Chapter addresses the objective of developing an approach to quality assurance that recognises the nature and purposes of universities. The Chapter briefly retraces the context for the study and the research objectives, and brings together key points from the previous Chapters to 'redefine the problem' and provide insights regarding a clearer pathway for the application of quality management in the university system. Viable Systems Modelling (VSM) is used as an aid for 'problem-solving' and a number of potential 'system faults' are highlighted. An attempt is made to identify particular areas where improvements to the quality assurance system would lead to better alignment with the nature and purposes of universities. The Chapter concludes with a discussion of the main findings from the present study and their relationship to themes in the literature.

Chapter 2: Quality Management Origins, Development & Application in Higher Education

By drawing from literature published in the past 30 years, the following Chapter traces the development of quality management through early models of inspection and control to TQM. The fundamental premises of TQM as a planning and improvement cycle are discussed with reference to the ideas of key quality theorists and then in relation to the implementation of TQM in business contexts. Discussion of the failures of TQM draws attention to its dependencies on people, places and purposes. Acceptance of these dependencies then leads to an understanding that quality management tools and methods should be used selectively rather than as a complete solution to organisational development and problem-solving.

The discussion then shifts to the implementation of quality management in higher education where questions of people, places and purposes are more opaque. The introduction of quality management is associated with the NPM reforms of the 1980s and the suggestion made that little has changed in its conception or implementation since that time. Despite recognised deficiencies in the operation of quality management and questionable benefits of the model to higher education, implementation persists. The more general observations are then situated within the New Zealand context, which provides a specific setting for the development of the thesis. The introduction and evolution of quality management in the New Zealand tertiary education sector[1] is outlined as a pre-cursor to the objectives and expected outcomes of the research presented at the conclusion of the Chapter.

THE RISE OF TOTAL QUALITY

Quality had its basis in the management of production through inspection and control. As industrialisation increased in the early twentieth century the need to ensure that the resulting products were of an adequate standard was addressed with the creation of inspection departments (Juran & Gryna, 1988). In the early 1930s more sophisticated forms of quality inspection were developed by Shewhart using mathematical and statistical modelling to reduce variation in manufactured products (Tuckman, 1995). The rebuilding of manufacturing industries that occurred in the post-war 1950s was the impetus for the next phase of the quality evolution from inspection and control to systems for the assurance and management of quality (Garvin, 1988; Australian Universities Quality Agency [AUQA], 2010). While the former phases ensured that defective products were found and discarded, the latter phases placed more emphasis on the examination and enhancement of processes to reduce the occurrence of defects (Winch, 1996). This shift enabled the incorporation of customer preferences during the design and delivery of the final product and provided the impetus for a review of the initial conceptions of quality as processes for inspection and control (Reeves & Bednar, 1994).

[1] Universities and higher education are not differentiated from tertiary education in many of the New Zealand-based publications which relate to all forms of post-secondary education in the 'tertiary education sector'. Consequently, 'tertiary education' is occasionally used when reference is made to New Zealand sources.

The stage was therefore set in the 1950s and 1960s for the entry of 'quality gurus' with W. Edwards Deming and Joseph Juran widely recognised as two of the founders of contemporary quality management (Ghobadian & Speller, 1994; Hackman & Wageman, 1995; Giroux & Landry, 1998). Both Deming and Juran advocated a 'total' approach to quality which included statistical and process control to improve business processes for the express purpose of meeting customer requirements. Deming's '14 Points' provided an agenda for organisational management predicated upon knowledge and understanding toward problem solving and improvement (Cox & Whan, 1990; Ghobadian & Speller, 1994; Houston, 2007a) and his general approach to understanding and improving quality through a cycle of 'Plan, Do, Study, Act' is still prevalent today (Flood, 1993; Juran, 1992). Juran's approach to the management of quality was driven by his "fitness for purpose or use" definition and the continuous improvement of product characteristics such as design and reliability (Ghobadian & Speller, 1994).

The contributions of other key theorists (Feigenbaum, Taguchi, Ishikawa and Crosby) are discussed by Flood (1993) and Ghobadian and Speller (1994). The theory and practice of quality management was expanded as a result of their focus on different aspects of quality such as 'zero defects' (Crosby), total quality control (Feigenbaum), financial loss as a result of poor quality (Taguchi), and tools and methods for quality improvement (Ishikawa). While their particular focus and recommended approaches may have differed, a common core emerged in terms of the need for organisation-wide attention to quality which meets the needs of customers while reducing production costs and variation in the final product. This 'philosophy' of quality was summarised by Scholtes (cited in Jacques, 1996) as

> *"six authentic, basic principles that lie at the heart of quality: focus on the outside customer (whoever benefits from our product or service, not necessarily who pays for it); understanding and managing systems (systems thinking is one of the new leadership competencies); understanding and using data (variation and causes of variation); understanding people (most companies approach people with either benevolent or malevolent paternalism, treating people like commodities needing manipulation); mastering improvement (rather than change); direction and focus (go inch wide and mile deep instead of vice versa)" (p. 7).*

Changes in the discourse in and around quality in the 1980s and early 1990s were presented by Giroux & Landry (1998) who noted that it shifted from a focus on delivering products that met customer needs to a "synonym for 'sound management'" (p. 4). In his exploration of 'total quality' Tuckman (1995) identified four developmental phases beginning in the late 1970s when emerging competition between Japanese manufacturers and those located in the 'West' prompted serious attention to tools and methods associated with streamlining production and gaining competitive advantage. Tuckman observed that the global economic recession of the early and mid 1980s reinforced a need for cost control in a context where there was increasing concern with customer service (1995). Later in that decade the concept

of customer service was extended to areas such as the public sector and TQM emerged as an overarching framework for inspection, control, assurance and management models of quality.

THE PINNACLE: TOTAL QUALITY MANAGEMENT

Whereas the focus of quality models had previously been on improving techniques, processes and management, TQM situated the models within a wider social system that included the organisation and its people. While the basic premise of quality to understand, meet and exceed customer requirements remained the central tenet (Spencer, 1994; Winch, 1996), the concept of customer was expanded from the end-user of the product or service to individuals and groups within the organisation as well as subsidiaries and sub-contractors (Connor, 1997).

This more inclusive approach, the idea that 'quality is everybody's business', emphasised the need for participation at all levels of an organisation for the purposes of continuous review and improvement of the coordination, management and implementation of business processes and objectives (Flood, 1993). Another distinguishing feature of TQM was the conception of organisations as systems comprising interdependent sub-systems (Hackman & Wageman, 1995). This perspective led to a greater emphasis on the ways in which processes interacted and spanned the organisation (Spencer, 1994) and prompted the use of 'cross-functional' teams for problem solving (Hackman & Wageman, 1995; Srikanthan & Dalrymple, 2005). TQM required that closer attention was paid to training and development so staff were empowered to actively participate in the management of quality and implementation of improvements (Hackman & Wageman, 1995; Spencer, 1994; Westphal, Gulati & Shortell, 1997). The practice of 'benchmarking' to assess competitor organisations and advance organisational learning through examination of alternative systems and processes was also associated with TQM (Hackman & Wageman, 1995).

Arguably TQM represented the pinnacle of quality management despite observations that the tools, technical methods and approaches remained the same as those espoused by Deming, Juran and others (Flood, 1993; Hackman & Wageman, 1995; Zbaracki, 1999). However, claims that implementing TQM would enhance customer focus, service performance, employee satisfaction, market share and organisational capability (Harwood & Pieters, 1990; Garvin, 1991; Wilkinson & Willmott, 1995) were increasingly being questioned in the light of alternative agendas associated with maximising profit by cutting production costs (Erridge, Fee & McIlroy, 1998; Harwood & Pieters, 1990; Garvin, 1991; Spencer, 1994). Indeed, Connor (1997) questioned whether TQM offered anything new at all.

TQM AND ITS FAILURES

Evaluations of TQM published in the literature concluded that it failed to deliver on the promises of improved organisational performance and staff empowerment (e.g., Flood, 1993; Hackman & Wageman, 1995; Wilkinson & Willmott, 1995; Zbaracki, 1999; Westphal et al.,

1997). Case studies purporting to showcase the effective implementation of TQM were criticised as being written by the implementer or by managers eager to justify their investment in the model (Hackman & Wageman, 1995; Zbaracki, 1999). It was also found that staff empowerment, which required the devolution of authority, proved difficult to implement in organisations with strong hierarchical structures (McCabe & Wilkinson, 1997; Flood, 1993). Overall, the literature indicates five main issues effecting the implementation of quality management in business and service organisations. These issues are summarised in the following sub-sections.

Inability to easily measure the outcomes of TQM

Evidence of successful TQM implementation was problematic as any correlation with profit, productivity or satisfaction levels was difficult to establish (Hackman & Wageman, 1995). Wilkinson & Willmott (1995) found little empirical evidence to support assertions that quality initiatives had been successful or otherwise. Ovretveit (2002) noted the difficulty of applying experimental designs to the evaluation of quality management interventions due to problems of standardisation, timing (both of the intervention and the assessment of success) and human factors. Instead, he advocated using more participant-based approaches that could build understanding of the factors that influence effectiveness (2002).

Contextual dependence of TQM interventions

Failure to formally consider the purposes, values, structure and culture of the organisation in addition to wider social, political and economic factors was a serious oversight in almost all studies reporting success or failure of TQM (Ghobadian & Speller, 1994; Giroux & Landry, 1998; Wilkinson & Willmott, 1995; Ovretveit, 2002). Consequently, the universal effectiveness of quality management was questioned and the generalisability of quality management principles and procedures under explored (Ghobadian & Speller, 1994; Gates & Cooksey, 1996; Ovretveit, 2002).

Problematic definitions of quality

Connor (1997) used the work of Juran, Deming, Crosby and others to draw attention to the multiple definitions of quality that operated in a variety of contexts. According to Reeves & Bednar (1994) differences in the outcomes of quality initiatives were largely due to different understandings and conceptions of quality. They observed that the prevalent 'conformance to specifications' approach was difficult to implement in service organisations and the level of standardisation required offset responsiveness and adaptability. Their conclusion that "multiple definitions and or models of quality are required to capture the complexity and richness of the construct" (1994, p. 11) affirmed the contextual dependence of TQM interventions.

Partial implementation of the philosophy, methods and tools

A number of authors observed a tendency to apply quality management tools and methods without committing to any overarching principles or philosophy (Juran & Gryna, 1988;

Crawford-Mason, 1995; Hackman & Wageman, 1995; Connor, 1997; Houston, 2007a). Particular attention has also been drawn to the wide use of objective measurement in contexts where such an approach was inappropriate and difficult to implement (Flood, 1993). In a study contrasting early and late adopters of TQM in the health sector of the United States of America Westphal et al. (1997) found that early adopters of TQM were more likely to customise the tools and methods in order to enhance efficiency. Late adopters—perhaps driven more by conformity than necessity—implemented only those elements of TQM required to attain a standard sufficient for affirmation of their legitimacy as a 'quality' organisation.

Perversion of purposes

Although TQM was intended as a whole-of-organisation approach to product and service improvement based upon partnerships between managers, staff, suppliers and customers, it could be derailed by the power relationships within organisations. Flood (1993) argued that one of the main issues with TQM was its failure to take account of the politics and coercion that was part of decision-making in organisations. This oversight meant it could be open to abuse by managers and consultants eager to pursue their own ends. The use of the rhetoric associated with TQM to progress agendas other than organisational improvement was also noted by Giroux & Landry (1998). McCabe & Wilkinson (1997) reported a particular example where TQM was used for the purposes of implementing a new mission statement and organisational restructuring. In the words of Houston: "quality became a catch cry of the pragmatic ideology of corporate culture as conformity to the values of management" (2007b, p. 28). Devolving responsibility (and therefore power) for decision-making was a challenge for managers (Flood, 1993) who sought to strike a balance between the empowerment of their staff and stricter measures and controls for behaviour and performance (Giroux & Landry 1998). The implementation of management by numerical quotas and performance-based pay provide two examples of ways in which quality management has been distorted beyond recognition from its original tenet of meeting customer requirements (Cox & Whan, 1990; Hackman & Wageman, 1995).

Given the consequences of these shortcomings and distortions, the widespread adoption of TQM in business organisations declined except in those areas seeking to gain the legitimacy or technical value associated with its use. Thus, the rise of quality within manufacturing contexts to the pinnacle of its applicability to 'all' organisations and back to only those contexts where the tools or methods may be of value could be viewed as one full 'Plan, Do, Study, Act' cycle. Over a period of decades, the rhetoric for and against TQM appeared to come to a point where organisations could select the models, tools and methods deemed most appropriate for the pursuit of their goals.

The Introduction of Quality Management to Higher Education

While the implementation of TQM in business organisations was largely driven by the organisations themselves in an attempt to enhance service performance, market share and

profit, the introduction of quality to higher education was driven by factors and agencies external to them (Barnett, 2003; Welsh & Metcalf, 2003; Houston, 2007a). A number of authors (e.g., Altbach, 2000a; Gordon, 2001; Singh, 2001; Organisation for Economic Co-Operation and Development [OECD], 2008a) have described those factors which include: increased access to higher education; increased accountability; decreased public funding resulting in the need to diversify income sources; changes to student demographics and a demand for 'flexible' education driven by new developments in information technology; and globalisation and the demand for consistency of educational standards. However, the primary basis for introducing quality models to higher education was the changing nature of the relationship between government and the public sector during the 1980s and 1990s broadly captured by the advent of NPM.

Quality management and NPM

New Public Management can be succinctly described as the transfer of business management practices, such as TQM, to public sector organisations to increase their efficiency and effectiveness (Watty, 2001; Morley, 2003; Brunetto & Farr-Wharton, 2005; Goldspink, 2007). NPM processes and techniques included the adoption of: administrative procedures to control costs; transparent financial management practices; strong central management complemented by appropriate devolution of authority to implement and/or steer change; provider/purchaser contracts internal and external to the organisation; and a firm focus on accountability to consumers demonstrated through explicit measures of performance (Power, 1997; Becher & Trowler, 2001; Deem, 2001; Chandler, Barry & Clark, 2002; Morley, 2003; Brennan, Enders, Musselin, Teichler & Valimaa, 2008, Olssen & Peters, 2010). Underlying NPM was an assumption that public services were inefficient and disconnected from the needs of their consumers, and private sector methods provided solutions to these problems (Walsh, 1995; Inglis, 2000; Watty, 2003; Schmidtlein, 2004; Goldspink, 2007; Lock & Lorenz, 2007).

The introduction of NPM to public services addressed what Power (1997) described as the right of taxpayers "to know that their money is being spent economically, efficiently and effectively—the three Es—and that citizens as consumers of public services are entitled to monitor and demand certain minimum standards of performance" (p. 44). As higher education attendance expanded from the 1980s onward NPM policies were progressively implemented to control government spending and foster service improvement through the establishment of a competitive education market (Codd, 2003; Olssen & Peters, 2010). Quality management tools and methods were particularly attractive in this context due to their growing popularity in a range of business organisations and their publicised benefits in terms of efficiency, market share and customer satisfaction.

The main effect of NPM on higher education was to open the door to greater standardisation, transparency and comparability of measurable outputs (Parker & Jary, 1995; Goldspink, 2007). Commenting on the impact of NPM on academic staff Olssen & Peters (2010)

observed an erosion of professional autonomy with the advent of hierarchical management structures and increased scrutiny of academic work in terms of the measurable outputs required for performance management. Ball (2010) linked the productivity measures demanded by NPM with the concept of "performativity" where measurable outputs become conflated with judgements about quality and value. The idea of 'value for money' became a general catch-cry of the NPM agenda although some authors have argued that 'value' in higher education was first and foremost about the improvement of resource management and accountability (Morley, 2003; Lock & Lorenz, 2007).

Conceptions of quality in higher education

Defining quality in relation to higher education has challenged experts and laypeople for decades. Harvey & Green (1993) were two of the first authors to identify multiple conceptions of quality based upon the feedback of different groups or stakeholders in universities. Later work by Winch (1996), Biggs (2001) and Harvey (2004a; 2009) refined and expanded the conceptions such that quality in higher education could be summarised as…

… being the best
… meeting and/or exceeding standards
… providing value for money
… meeting the needs of stakeholders or customers
… transforming people and knowledge
… assuring fitness for purpose (of programmes or higher education).

Application of these definitions to higher education has not been without problems. The idea of fitness for purpose raised questions regarding how the nature of 'fitness' and 'purpose' was to be determined (Harvey & Green, 1993; Winch, 1996; Giertz, 2001; Van Damme, 2001). The main issue was that understanding fitness for purpose depended upon whether and to what extent value was placed upon the disciplinary, institutional, pedagogic or vocational views of higher education (Brennan & Shah, 2000). An additional complication arose from the 'purposes' being determined not necessarily by the 'customer' but by a university itself or some other intermediary (Harvey, 2002). For example, an emphasis on the vocational aspects of higher education suggested that quality could be determined by the 'fitness' of graduates for the purposes of their employer or industry. Following this line of reasoning several authors have noted that the acquisition of generic knowledge and skills such as communication, problem solving, teamwork and critical thinking were central to employer and industry needs (Vroeijenstijn, 1995; Bowden & Marton, 1998; Chua, 2004). However, tensions existed between these 'generic needs' and the particular needs of individual business organisations whose demands were actually quite diverse (Cannon, 1986).

Implicit in a number of the definitions is the idea of students as 'customers' (Houston, 2007a) and the emphasis placed on the vocational outcomes of higher education alongside student experiences of teaching, learning and services within a university (Doring, 2002; Chua, 2004; McPherson & Shulenburger, 2006; Higher Education Funding Council for England, 2008). In regard to vocational outcomes, students' perceptions of quality are a function of multiple factors such as the student's motivation and knowledge on entry to a university, and the perceived personal, social and economic value of the qualifications attained at the time of exit and beyond. Indeed, it has been argued that the quality of students' experience with teaching, learning and services is more closely linked to the relationships and interactions that students have with a university and its staff (Luizzi, 2000; Meyer & Evans, 2002). In each case multiple factors govern these relations and interactions, including the extent to which the qualifications, their delivery, and the personal, financial and academic support aligns with the changing requirements of the student.

A strong focus on the student as a customer provides only a limited perspective on the number and nature of interactions occurring in higher education (Sharrock, 2000). Drawing on the work of Coate (1991), Harvey & Green (1993) and Kanji, Malek & Tambi (1999) it can be shown that students are one of many 'customers', 'stakeholders', or 'users' of higher education (Table 1) each of whom have differing conceptions and expectations, both of quality and of higher education (Vroeijenstijn, 1995; Brennan, 1997; Newton, 2001; Watty, 2003; Chua, 2004; Schmidtlein, 2004; Kis, 2005). Consequently, an approach to quality based on 'meeting customer requirements', 'fitness for purpose' or any of the other aforementioned conceptions is too simplistic to capture the complex balancing act required of a university in the service of its stakeholders (Sharrock, 2000). As observed by Schmidtlein (2004) "the interests of particular participants are served to greater or lesser degrees at various times" (p. 271) depending on the immediacy of their demands and/or the resources available to address them. Indeed, it is possible that the very purposes of higher education could shift as a university seeks to balance the values and goals required by its stakeholders (Bowden & Marton 1998).

Table 1: 'Customers' of Higher Education

Students current and potential	Professional bodies
Parents of current and potential students	Industry
Graduates past and future	Funding agencies
Employers of graduates	Local community and region in which a university is
Current and potential academic staff	placed
Current and potential general staff	National system in which higher education plays a part
Faculties and units internal to a university	Government
Disciplines & disciplinary networks	Society in general

Quality management approaches, tools & methods

Many authors argue that NPM positions government as the main driver of the quality management approaches, tools and methods applied in higher education (Walsh, 1995; Harvey & Newton, 2004; Goldspink, 2007; Chalmers, Lee & Walker, 2008). The prevailing model of application has been described as one of purchaser/provider, with service agreements or formal contracts used to specify the standards, outputs and/or outcomes required for the alignment of higher education with national goals (Walsh 1995; Goldspink, 2007). Monitoring of both the service and the delivery has been achieved with the use of *quality assurance* mechanisms primarily focused on the assessment of higher education 'quality' using inspection and performance measures (Taylor, Gough, Bundrock & Winter, 1998; Chandler et al., 2002; Chalmers, 2007). The distinction between the use of 'quality management' and 'quality assurance' is an important one to make at this point in the discussion. Quality management is used with reference to its original conception as a coordinated approach to the planning, implementation and review of objectives and processes for the purposes of improving products and services for the benefit of the customer(s). Quality assurance relates to the tools and methods (e.g., statistical process control, inspection, staff training and development) utilised to support a quality management approach.

The nature and purposes of quality assurance in universities is the subject of expanded discussion in Chapter 5. The overall process is typically based on a three-tiered approach comprising national agencies, public reporting of performance indicators, and either a light-touch self-assessment of a university's performance coupled with external 'peer review' of the report produced, or a more heavy handed inspection of a university's activities including teaching and research (Harman, 1998; Brennan & Shah, 2000; Gordon, 2001; Harvey, 2002; Morley, 2003; Harvey & Newton, 2004; Kis, 2005; Asia-Pacific Quality Network, 2008). The peer-review or inspection elements have been advanced with the liberal use of accreditation and academic audit (or 'quality audit') models (Kis, 2005; Harvey, 2007) although neither model provides the measurable outputs and comparable standards of performance required by NPM. Instead, heavier weighting is normally placed upon numerical performance indicators classified according to selected 'inputs', 'processes' and 'outputs' (or outcomes) of higher education (Bottrill & Borden, 1994; Vroeijenstijn, 1995; Chalmers 2008). One of the assumptions underpinning this approach is that the performance of higher education can be determined when there is systematic monitoring of measurable performance indicators (Thune 1998; Ewell, 1999). A number of authors and agencies (e.g., Association of Universities and Colleges of Canada, 1995; Chua, 2004; PhillipsKPA, 2006; Chalmers 2007; Coates, 2010) have attempted to capture the quantitative and qualitative indicators associated with the three dimensions (e.g., inputs such as staffing and student entry criteria, processes that support teaching and learning and graduation outputs) as well as social and economic factors likely to influence the indicators (e.g., student demographics and funding availability). However, complications have arisen from the different conceptions of quality operating in higher education and the effect these have on weightings given to some

indicators at the expense of others (Ewell, 1999; Schmidtlein, 2004). An idealised representation of the quality assurance process typically applied in higher education is presented in Figure 1. The Figure depicts the centrality of performance assessment and public reporting associated with NPM alongside tools for inspection and peer-review.

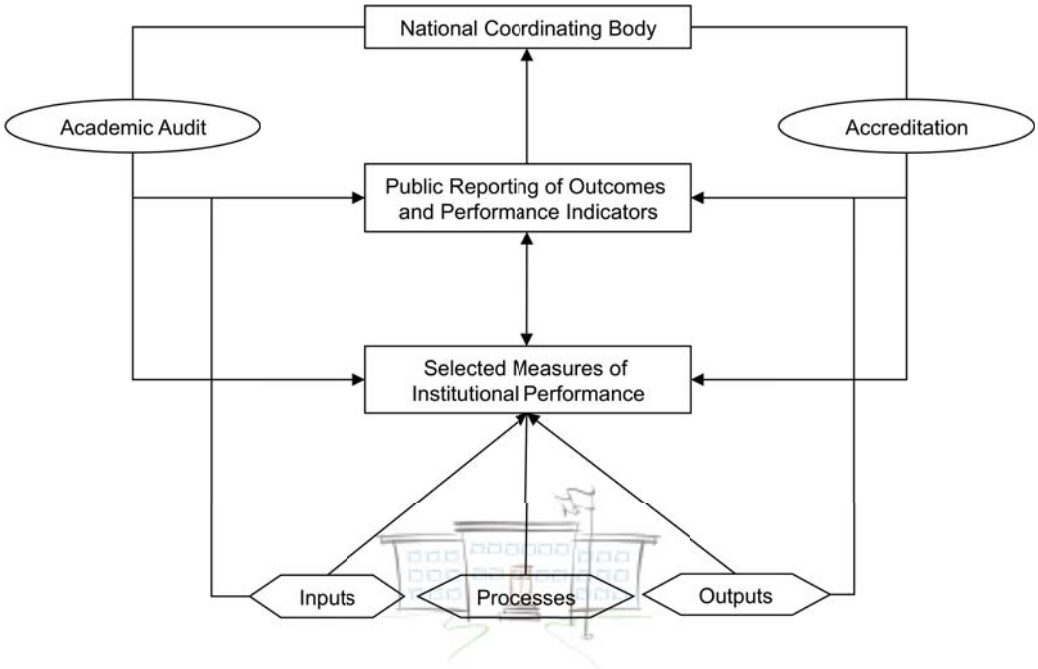

Figure 1: A general description of the quality assurance tools and methods typically applied in higher education

The failings of quality assurance

Reflecting on 15 years of articles published in the "Quality in Higher Education" journal, Harvey & Williams (2010b) found that few studies discussed the impact of quality assurance. Of those studies that did provide commentary on the results of quality assurance in higher education many painted an overall picture of dissatisfaction with quality assurance mechanisms (e.g., Taylor, et al., 1998; Newton, 2000; Welsh & Metcalf, 2003; Stensaker, 2003; Harvey & Newton, 2004; Kis, 2005; Anderson, 2006; Chalmers, 2007; Cheng, 2007; Stensaker, 2007; Gallagher, 2010). In one of the more comprehensive accounts of quality assurance in higher education to date, Gallagher observed a "loss of confidence in established quality assurance regimens" (p. 37) primarily due to their failure to deliver information sufficient for the accountability and performance elements of NPM (2010). These findings have been balanced to some extent by information regarding benefits such as enhanced engagement between higher education and its stakeholders, and increasing confidence in higher education outputs driven by more transparent forms of accountability (Jackson, 1997a; Harman, 1998; Dill 2000; Harvey, 2006; Stensaker, 2007). However, it is important to note that there are significant failures associated with the implementation of quality management in higher education just as there were for TQM in business organisations. The limitations of quality assurance are examined in more depth in Chapter 5,

but at this point it is useful to observe the parallels between the points of failure in business and higher education shown in Table 2 and summarised in the sections which follow it.

Table 2: Comparison of Quality Management Failures in Business Organisations and Higher Education

Reasons for failure of TQM in business organisations	**Reasons for dissatisfaction with quality assurance in higher education**
Inability to easily measure the outcomes of TQM	Inability to measure the outcomes of quality management
Contextual dependence of TQM interventions	The question of 'fit' between quality management and higher education
Problematic definitions of quality	Problematic definitions of quality
Partial implementation of the philosophy, tools and methods	Partial implementation of the philosophy, tools and methods
Perversion of purposes	Perversion of purposes

INABILITY TO MEASURE THE OUTCOMES OF QUALITY ASSURANCE IN HIGHER EDUCATION

Because the general approach to measuring the outcomes of quality assurance in higher education has been predicated upon a rational model that assumes linear and causal relationships between 'inputs' and 'outcomes' (Schmidtlein, 2004), interventions including, or related to, quality assurance are expected to have clear and measurable outcomes. Unfortunately, higher education is complex and there are no easy measures of success in relation to the core processes such as teaching and learning. Stensaker (2007) observed that many studies exploring the impact of quality management have been unable to provide any evidence of improvement in this regard. Moreover, Harvey & Newton (2004) argue that changes or improvements within higher education can be associated with factors other than quality management. In any case, the inability to directly measure the effect of quality management on higher education remains a point of contention within the model.

THE QUESTION OF 'FIT' BETWEEN QUALITY ASSURANCE AND HIGHER EDUCATION

Concern has been expressed regarding the effectiveness of quality assurance processes and their fit with the nature and purposes of higher education (Morley, 2003; Anderson, 2006). Clearly there are differences between the role and function of business organisations and universities (Van Patten, 1993; Winch 1996; Meyer & Evans, 2002; Meister-Scheytt & Scheytt, 2005). Furthermore the industrial model of production that underpinned quality management has proved difficult to adapt to higher education (Readings, 1996; Roffe, 1998; Edwards, 2003; Malcolm & Tarling, 2007). For example, the cross-functional and team-based methods advocated in quality management often run counter to the individual and discipline-based approaches prevalent in university faculties (Coate, 1991). The culture within higher education is more liberal and permissive than that in the commercial sector

(Holmes & McElwee, 1995), and the goal of maximising profits for the benefit of shareholders is not a common one in higher education (Edwards, 2003).

In studies of academic staff perceptions about the impact of quality assurance in higher education, findings indicate that it has had little or no effect on curriculum, teaching quality, or student learning (Storey, 1994; Taylor et al., 1998; Lazerson, Wagener & Shumanis, 2000; Newton, 2000; Harvey & Newton, 2004; Cheng, 2007; Chalmers, 2007). At best, there is a possibility that quality assurance has provided an opportunity for educators and administrators to think differently about existing systems and processes (Cheng, 2007). At worst, quality assurance has served only to increase the time and cost associated with bureaucratic requirements within higher education (Van Patten, 1993; Newton, 2001; Stensaker, 2003; Harvey & Newton, 2004), and diverted attention away from the core processes of teaching and learning (Porter, Rehder & Muller, 1997; Jones & Darshi De Saram; 2005).

Problematic definitions of quality

Differing conceptions of quality such as 'fitness for purpose', 'excellence', or 'meeting the standard' mean that consensus regarding a singular definition is unlikely (Kis, 2005). This poses challenges for the implementation of conventional approaches to quality management that use defined customer requirements to inform the continuous improvement of business processes. Due to the plurality of perspectives on quality in higher education, it has been suggested that alternative approaches are needed to take account of diverse and sometimes conflicting conceptions (Nordvall & Braxton, 1996).

Partial implementation of the philosophy, methods and tools

In regard to the application of TQM to higher education, Bailey & Bennett (1996) observed "as with industry, administrators are looking for pieces of the process that can be grafted onto the existing structure with minimal pain. This however will not work any better for higher education than it did for industry" (p. 77). Applications of TQM have been largely confined to business processes associated with the support and service functions of universities with little attention given to the core productive activities of teaching and research (Coate, 1991; Koch & Fisher, 1998; Houston, 2007a). There has also been a particular focus on applying selected quality assurance tools (Harvey & Green, 1993; Harvey 2002; Stensaker, 2007) such as documenting procedures (Morley, 2003) and establishing numerical indicators of performance (Thune, 1998). These issues are examined more fully in Chapter 5.

Perversion of purposes

The linkages between NPM, quality management and the advancement of political agendas not directly related to the improvement of teaching, learning and research have been the subject of critical discussion over the years (Barnett, 1994; Gunn, 1995; Power, 1997; Henkel, 2000; Goldspink, 2007). A particular feature of NPM has been its ability to

challenge formal sources of power and authority within organisations, overwriting professional and collegial discourses with those of the market and performance management (Power, 1997; Henkel, 2000; Codd, 2003; Harloe & Perry, 2004). The implementation of quality assurance has also gone some way to consolidating NPM through external peer-review and inspection processes that have undermined existing procedures and knowledge within higher education (Smyth, 1989; Barnett, 2003). As stated by Houston (2007a) "Quality assurance and audit processes as the dominant methodology for quality in higher education reflect the ascendance of quality management as a technology of control rather than improvement" (p. 10). The links between quality assurance and the 'systems of knowledge/power' operating within universities are the subject of focused discussion and analysis in Chapters 5 and 6.

QUALITY AND THE NEW ZEALAND TERTIARY EDUCATION SECTOR

New Zealand provides an interesting case study of the introduction and evolution of NPM and quality management. Factors such as its small size (the population is approximately 4.3 million) and parliamentary democracy mean that the development, implementation and impact of policies can be investigated over time periods which are comparatively shorter than those in larger countries. In a review of the tertiary education sector conducted by the OECD New Zealand was reported "as one of the international innovators" in the field of quality assurance (Goedegebuure, Santiago, Fiznor, Stensaker & van der Steen, 2007, p. 15). Christensen & Laegreid (2001) discussed the NPM reforms implemented in New Zealand in the late 1980s as the OECD's 'test-case' describing the country as "a radical and aggressive reformer" (p. 79) with policies that strongly reinforced a competitive market model, and extraordinary effort made to "create conditions under which formal contracts are negotiated and enforced" (p. 82).

Sullivan (1997) summarised the foundation reports that introduced NPM and quality management to the New Zealand tertiary sector citing the "Hawke Report" and "Learning for Life 1 and 2". The "Hawke Report" (Hawke, 1988) recommended the centralisation of policy and funding mechanisms made operational through the "negotiated charters" of decentralised tertiary education organisations (TEOs) (p. 12). Hawke observed that in order for the system to work, there had to be a genuine devolution of power to the TEOs so that decision-making could be as close as possible to the location of delivery (1988). Hawke's recommendations were ratified in the subsequent "Learning for Life" report (Lange & Goff, 1989) which foreshadowed major reforms to the tertiary education sector including establishment of a Ministry of Education (MoE), New Zealand Qualifications Authority (NZQA), and a devolved system of 'accountability and effectiveness'. In the new system, post-secondary education and training providers would be recast as 'bodies corporate' with defined 'structures and powers' (p. 11).

The New Zealand universities initiated a collective response to the proposed reforms and advocated the establishment of their own systems for accountability and quality assurance:

systems that would enable them to demonstrate their responsibility while mitigating the political control that could be imposed by the government (Malcolm & Tarling, 2007). The outcomes of the reforms and the universities' collective response were captured in the Education Act (1989) (The Act). Responsibility for the quality assurance of universities was delegated to the New Zealand Vice-Chancellors' Committee (NZVCC[2]) and the NZQA assumed this role for all other TEOs in the sector (MoE, 2006a). Relevant sections of The Act are reproduced and discussed in Chapters 4 and 5 with reference to the role of the Government in the establishment of the quality assurance framework, and the responsibility of universities to make effective quality management systems operational.

In effect the general approach to quality management espoused in New Zealand is not dissimilar from the tools and methods of quality assurance presented in Figure 1. The general requirements involve TEO registration, approval of individual qualifications, accreditation of a TEO to offer approved qualifications, and quality audits for ongoing monitoring (MoE, 2006a). For universities, approval of individual qualifications and subjects is carried out by the NZVCC Committee on University Academic Programmes (CUAP) which includes representation from all of the universities. Quality audit is conducted by the New Zealand Universities Academic Audit Unit (NZUAAU) which is an independent agency also established by the NZVCC. The roles and functions of each of these agencies are the subject of critical analysis in Chapter 5.

Review and renewal of quality assurance in New Zealand

The major reforms of the late 1980s were largely driven by concerns regarding low participation rates in the tertiary education sector (Cullen, 2006a). The competitive model advanced by NPM provided financial reward to TEOs on the basis of student numbers and by the turn of the century participation rates were at an all time high and increasing—as was government expenditure on tertiary education. Unintended consequences of the reforms had already begun to surface in the late 1990s with an increasing number of TEOs experiencing financial difficulties, qualifications proliferating, and the competition between TEOs perceived to be destructive (Pons & Raine, 2004). In regard to quality assurance, the cost of maintaining the system was estimated at approximately six million dollars per annum (Cabinet Business Committee, 2006) and this was weighed against a growing concern within the sector that little value was being gained from the processes (Goedegebuure et al., 2007).

In 2000 the New Zealand Government sought advice on these and other issues through the establishment of a Tertiary Education Advisory Commission (TEAC) (MoE, 2006a). TEAC produced four reports between 2000 and 2002 which explored a vision and strategy for the tertiary sector as a coherent and integrated entity (TEAC, 2000; 2001a) followed by recommendations regarding the shape of the system and its funding framework (TEAC,

[2] The New Zealand Vice-Chancellors' Committee was renamed "Universities New Zealand" in 2010 but I have used its former title throughout the thesis to remain consistent with the nomenclature used in related references.

2001b; 2001c). The work of TEAC provided the foundation for a new wave of reforms progressively developed and implemented over the past decade.

The intent of the most recent reforms has been to shift emphasis on the quantity of education delivered by TEOs to the quality of education experienced by learners (MoE, 2004; Cabinet Policy Committee, 2006). The idea of the 'knowledge economy' has appeared as a core theme placing tertiary education at the centre of individual, local and national economic and social development (MoE, 2008a; 2009b). Studies in New Zealand have sought to reinforce this perspective by identifying tertiary education as a "major driver of economic performance", associating tertiary qualifications with better health, higher earnings and higher employment (MoE, 2008a, p. 4). A follow up study (Scott, 2010) expanded these findings with social benefits of tertiary education such as "higher tolerance of immigrants, different values, ways of living and ethnic diversity" (p. 2). Research by Scott also noted that the higher the level of qualification (degree or postgraduate degree) the more positive the effects (2010).

Positive correlations between education, employability and higher earnings were the subject of critical discussion by Wolf (2002) who observed that the links between education and the economy were self-perpetuating in that "industrial economies create their own demand for education" (p. 54). She argued that the ever-expanding demand for education that could drive the economy was "fuelled by individual self-interest, and by politicians' quest for growth" and in the final analysis would be found to be more harmful than advantageous (pp. 198-199). Nevertheless, the connections between education and the economy continue to be a centrepiece of the tertiary education reforms in New Zealand amidst a "growing sense that education is just a commodity rather than something of more intrinsic value" (State Services Commission, 2005, p. 17).

Instruments for formalising the goals for tertiary education 'and steering' the system toward them have included the Tertiary Education Strategy (TES) and Statement of Tertiary Education Priorities (STEP), and appropriate funding and performance monitoring tools. The first TES was published in 2002 and the second in 2006 (MoE, 2008a). However, these steering mechanisms appeared to have little effect on reducing the tertiary education budget, providing "meaningful information to inform purchase and/or enrolment decisions" by the Government and students, or improving the accountability of TEOs for their performance (Tertiary Education Commission (TEC), 2010, p. 3). Election of a National-led government in 2009 heralded a revised TES (released in 2010) which strengthened the focus on 'value for money', performance management and enhancing the links between tertiary education and the economy (TEC, 2010). In relation to specific mechanisms for quality assurance, the government chose to continue implementation of amendments to the Education Act (1989) passed in 2007 which defined a new system for planning, funding and monitoring tertiary education, as well as consolidating the relationship between quality assurance and accountability.

The new system, implemented from 2009, places a strong emphasis on the production of evidence and information that enables government, employers, students and other stakeholders to assess the quality of "organisational capability (governance, management, etc), teaching, learning and research processes, learning and knowledge outcomes, and contribution to economic and social development outcomes" (TEC, 2006, p. 5). Central to the system is TEO self-assessment of 'valued outcomes', use of generic and institution-specific evaluative and performance indicators, and external validation of the TEO's findings (Cabinet Business Committee, 2006; MoE, 2008a).

Renewal of the quality assurance requirements for tertiary education was an ongoing concern at the time the thesis was written with the framework and processes still being refined. Although the recommendation of a Quality Assurance Expert Advisory Group (2007) reinforced the need for quality assurance to remain independent of funding mechanisms, this advice has been ignored with the introduction of performance-based funding for both teaching and research in TEOs. Nevertheless, a key question remains regarding whether or not the 'new' systems for quality assurance and monitoring will offer anything different from those summarised previously in Figure 1. This question and others provided the impetus for the investigations and analyses presented in the following Chapters. What is quality assurance? What does it do? What should it do? How could it be improved (and from whose perspective)?

THE RESEARCH PROBLEM

The discussion so far has provided an overview of quality management as it has been applied within business organisations and its later transferral to higher education as part of NPM reforms. Parallels between the reasons for failure of TQM in business organisations and the main issues associated with quality assurance in higher education have been identified. Yet systems for quality assurance persist in higher education and are arguably proliferating despite calls for change. Blackmur (2010) called for a "moratorium on any further development and extension of public higher education 'quality assurance' systems" (p. 67). Singh (2010) suggested that the chances of redeeming quality assurance in such a way as to "strengthen reflexivity" within higher education were slim (p. 193) as long as existing approaches persisted. In New Zealand the quality assurance reforms led by government and focused on improving accountability and performance appear to reinforce an approach where quality assurance is constructed and implemented at a distance from disciplinary, pedagogical or university-level considerations. The essence of quality management as an integrated philosophy for improvement of the 'core business' of an organisation has been lost amongst the drive to establish, document and implement generic systems and objective measures.

Quality assurance in universities could be viewed as a 'wicked problem' (Rittel & Webber, 1973) with no immediate solution.

> *"For wicked planning problems, there are no true or false answers. Normally, many parties are equally equipped, interested, and/or entitled to judge the solutions although none has the power to set formal decision rules to determine correctness. Their judgements are likely to differ widely to accord with their group or personal interests, their special value sets, and their ideological predilections" (1973, p. 163).*

It may be that "we cannot speak of 'quality'; we have to speak about 'qualities'" (Vroeijenstijn, 1995, p. 25). What is very clear is that conceptualising, implementing and assuring quality in universities is complex and dependent on a series of interactions between people, purposes, values, processes and structures (Karapetrovic, Rajamani & Willborn, 1999; Schmidtlein, 2004; Jones & Darshi De Saram, 2005).

Houston (2007a) stated that "authentic quality theory is essentially systemic; attending to values, purpose and optimising performance relative to the aim of the system" (p. 13). Attending to quality from a "systems" perspective provides a means of exploring elements within the university system in a manner that does not ignore the complex interactions that occur between elements. However, the application of systems thinking to higher education has received very limited attention (Ison, 1999) with systems ideas sometimes intersecting education rather than education literature drawing directly on systems ideas (Houston, 2007a). Banathy & Jenlink (2004) provide one of two seminal works in the area, exploring education as an open and human activity system with complex interactions occurring internally as well as with the external environment.

The other seminal work used a critical systems approach to conceptualise and examine quality in a university (Houston, 2007b). Exploring the perspectives of staff and students within a university department, Houston concluded that the key to improvement of teaching, learning and research was the development and implementation of local interventions. Unfortunately, the ability to achieve improvement in the local context was constrained by multiple factors many of which operated within the wider systems of which the department was an element. This work provides a useful point of departure for the present study in terms of exploring the university system and investigating the constraints that exist. The present research begins from a premise that reconciling the fit between quality assurance and universities requires acceptance that:

1. quality in universities is systemic and complex, underpinned by local, national and international understandings, and transcending disciplinary, institutional, economic and political boundaries;
2. the perspectives of multiple stakeholders are required to advance understandings of quality assurance in universities;

3. there is a need to examine assumptions regarding the nature and purposes of universities, including the values and beliefs that operate at various levels of the university system; and
4. the socio-political and socio-technical aspects of quality assurance must be explored, especially in the context of the power relations that may privilege particular forms of knowledge above others.

Consequently, exploring quality in the university system requires an appreciation of quality management (ideology, tools and methods) informed and directed by an appreciation of universities (people, purpose(s), values, structures and processes). This leads to the objectives and expected outcomes of the thesis which can be summarised following.

The research objectives

1. To investigate, compare and contrast perceptions of quality and quality assurance at different levels of the university system including the government, the university 'senior management', university 'middle management' and academic staff.
2. To use systems thinking to examine assumptions regarding the nature and purposes of quality assurance in universities, and to explore and problem solve conflicting perceptions.
3. To develop an approach to quality assurance that recognises the nature and purposes of universities.

Expected outcomes

The research aims to:

- provide insights regarding a clearer pathway for the application of quality management in the university system;
- address a perceived gap in terms of defining quality assurance in a manner that acknowledges the purposes of universities and their complexity; and
- test the use of systems thinking as a framework for exploring quality assurance in universities.

The wide scope of the present study requires a systems approach that can take account of, and integrate, multiple perspectives within and across the university system. The use of CST and TSI as overarching frameworks for the study, together with the research methods applied to advance the objectives and outcomes are the subject of the following Chapter.

Chapter 3: Research Methods

The design and implementation of a 'critical systems approach' to the study of quality in New Zealand universities which is the subject of this Chapter begins with a brief overview of systems thinking and the evolution of CST in the 1980s and 1990s. The core themes of CST are presented and the cardinal principles of TSI—as a metamethodology underpinning CST—are discussed. My reasons for selecting CST as the research framework for the study are then described and the research protocols detailed. Particular attention is paid to the design of the study including defining the context, collecting data from the case study university and 'broadening' the dataset using published literature. Information is provided regarding the selection and application of the various systems methods used to support a triangulated analysis and interpretation of the data in later Chapters. It is important to note the concluding comments to the Chapter which make some observations regarding the appearance of linearity in the reporting of research methods. The process of designing, implementing and reflecting upon the research methods and their application was a creative and iterative one, in line with the phases of 'creativity, choice and implementation' that characterise TSI.

AN INTRODUCTION TO SYSTEMS THINKING AND CRITICAL SYSTEMS THINKING

A system can be defined as a group of elements that function together for a specific purpose, and processes operating within and across elements may give rise to sub-systems or structures (Banathy & Jenlink, 2004). However, it is the way in which the elements interact that contributes to the larger system and makes the 'whole greater than the sum of its parts' (Betts, 1992; Ackoff, 1999, Daellenbach & McNickle, 2005). The idea that the whole has characteristics that its constituent elements do not is explained using the concept of 'emergence' (Kay & Bawden, 1996; Goldstein, 1999). Emergent properties of a system are those that cannot be predicted purely from a study of its structures and elements. Systems thinking is about understanding the whole as opposed to a reductionist approach which seeks to analyse constituent parts and establish linear and causal relationships (Flood, 1999; Houston, 2007a).

> *"Systems theory embraces the importance of global perspectives, multiple components, interdependencies and interconnections in any system. In addition, the recognition that change in one part of a system necessarily alters the rest of the system, is a cornerstone of systems theory" (Carr-Chelman, 1998, p. 371).*

The initiation and evolution of Systems Thinking was described by Banathy & Jenlink (2004). A general theory of systems was originally published in the 1940s by Bertalanffy and this was followed by a hard sciences approach that provided a basis for the systems strands of Operations Research and Systems Engineering. Attempts to transfer these quantitative approaches to social systems in the 1960s and 1970s were unsuccessful due to the perceived failure of hard science to deal with complex problems in real-world settings (Jackson, 2000). The advent of cybernetics during this period was an early attempt to

understand the self-organisation of artificial and living systems, but the key shift in systems thinking occurred in the late 1970s and early 1980s when Checkland (1981) made a distinction between hard and soft systems thinking. Checkland associated hard systems thinking with the earlier systems approaches that attempted to take an objective view of the system in focus and imposed (or assumed) the purpose of the system, whereas soft systems approaches were those that acknowledged the purpose of the system as dependent upon the optic through which it was examined, and were in fact socially constructed in the minds of people (Checkland, 1981, Kay & Bawden, 1996; Jackson, 2000). In this respect Checkland's Soft Systems Methodology was attentive to the role of humans as actors within a system, and the need for different stakeholders to debate and decide on the purpose of the system (Daellenbach & McNickle, 2005). However, limitations to the use of Soft Systems Methodology arose due to the inability of human participants to rationally problem-solve, achieve consensus about the system's purpose, and identify the actions most likely to facilitate desired changes. In short, issues of ethics, power and politics are inherent features of human systems that are not explicitly addressed in the application of Soft Systems Methodology (Jackson, 2000; Ulrich, 2001).

Critical Systems Thinking evolved in the mid 1980s as a strand of Systems Thinking that sought to shift the focus from particular systems approaches (e.g., Soft Systems Methodology, Operations Research) to understanding the context of the problem so that an appropriate approach could be identified and applied (Daellenbach & McNickle, 2005). CST was predicated upon critical theory and the notion of reflexive practice to raise awareness of the power relations and social dynamics within a research context that could privilege particular interests and knowledge bases above others (Alvesson & Skoldberg, 2000). The 'critical' researcher is one who reflects upon the research design, implementation and impact to expose the underlying assumptions, norms and values that had been included (or excluded) from the analysis (Boyce, 1996). Midgley (2000) described this idea succinctly when he wrote "critical theorists say that to be critical means to reflect on facts and values" (p. 139).

Although the idea of a critical approach to research that took account of the values and norms operating in the problem context was outwardly appealing, vague or absent information regarding how to go about it was a constraint (Alvesson & Skoldberg, 2000). In response, early work by Jackson & Keys (1984) sought to provide a framework for the categorisation of problem settings according to the extent to which participants reported a shared understanding of the system's goals and the complexity of the system itself. Settings where goals were reportedly shared by participants were deemed to be unitary, while those where there was disagreement about the goals to be served were pluralist. Complex systems were unpredictable with many elements that interacted within the system and with the external environment, whereas simple systems had few elements and clear boundaries between the system and its outside environment. The framework was later refined by Jackson (2000) to include coercive systems where the power relations amongst the participants were unbalanced (or even abused) to the extent that the demands of one or more

groups were privileged above others. A summary of Jackson's classification of problem contexts is provided in Table 3.

Table 3: Jackson's Categorisation of Problem Contexts (2000, p. 359).

	Unitary Participants	Pluralist Participants	Coercive Participants
Simple Systems	Simple-Unitary	Simple-Pluralist	Simple-Coercive
Complex Systems	Complex-Unitary	Complex-Pluralist	Complex-Coercive

In addition to the classification of problem contexts, Jackson (2000) developed a coherent framework aimed to match problem-solving tools to real-world problem contexts. He also conceived a 'meta-methodology'—Total Systems Intervention (TSI)—to support the use of critical systems approaches for organisational learning and problem solving. The cardinal principles of TSI have been described in the literature (Flood & Jackson 1991a; Flood, 1995; Jackson 2003), and draw upon the work of Morgan (1997) who introduced the idea that the images and metaphors underpinning organisation and management theory could be used to provide insights into the ways in which organisations operated. The principles of TSI are summarised as follows:

- organisations are complex and multiple perspectives are required to illuminate a problem context;
- organisational metaphors should be used to encourage critical and creative thinking about the problem context and to guide the selection of methods and methodologies for intervention;
- the achievement of meaningful participation is required so that all participants can engage in dialogue to explore and debate the issues; and
- theory and methodology should be used in a complementary and coherent manner.

The implementation of TSI involves three cyclical and iterative phases (Table 4): creativity, including the use of organisational metaphors to highlight aims, issues and concerns; choice of the appropriate systems methodologies; and implementation to arrive at specific change proposals (Flood & Jackson, 1991a; Jackson, 2000). Building on the work of Checkland & Scholes (1990, cited in Jackson, 2000) Jackson also observed that the application of TSI could proceed in two modes. Applied in Mode 1, TSI is used to steer an intervention, while in Mode 2 it can promote critical reflection about an intervention or problem context in an effort to identify opportunities for new directions and improvement.

Table 4: The Three Phases and the Tasks, Tools and Outcomes of TSI

	Task	**Tools**	**Outcomes**
Creativity	To highlight aims, concerns and problems	Use of organisational metaphors	Dominant and dependent metaphors are identified, issues and problems are highlighted
Choice	To choose an appropriate systems based intervention methodology(ies)	Systems methodologies and knowledge of their relative strengths and weaknesses	Dominant and dependent methodologies chosen for use
Implementation	To arrive at and implement specific change proposals	Systems methodologies applied	Highly relevant and coordinated intervention toward improvement

To summarise, CST is about taking a systems view, applying it to real-word problem contexts, exposing beliefs, values and assumptions, and using the systems theories, methodologies and methods of TSI for the express purpose of problem-solving and improvement. The approach is effectively captured in the following three themes which form the core of CST (Midgley, Munlo & Brown, 1998; Flood, 1999; Brown & Packham, 1999; Schecter, 1999; Clayton & Gregory, 2000; Jackson, 2000; Banathy & Jenlink, 2004):

i. **Critical awareness**: of the context, the participants, and the assumptions and values operating.
ii. **A focus on improvement**: broadly defined and incorporating issues of power to advance the best possible outcomes for all participants.
iii. **Pluralism**: use of multiple methods and systems methodologies to illuminate the problem context, to advance critical awareness and to identify authentic improvement.

Jackson (2000) summarised some of the criticisms of TSI in terms of achieving meaningful engagement amongst participants, and how the role of the researcher is accounted for in the framework, given that he or she will bring particular values, competencies and knowledge to the problem context. Criticism has also been levelled at the accessibility of systems ideas and TSI to researchers in a variety of disciplines and contexts (Armson, 2008) especially when they demand that practitioners have sufficient understanding of the multiple methodologies associated with a range of systems approaches (Carr-Chelman, 1998). In her exploration of managers' reluctance to engage with systems thinking Armson (2008) noted that the ease with which systems ideas were conceptually grasped belied the intellectual and emotional demands associated with their use. One of the main drawbacks perceived by users was that "systems thinking does not tell you what to do. It simply provides strategies for finding out" (p. 6). In other words, systems approaches require a significant amount of time

and effort to think critically and comprehensively about a problem context which is a luxury not often afforded to day-to-day decision makers. It is, however, an approach that might usefully be explored within a doctoral dissertation.

SELECTION OF CST TO EXPLORE QUALITY IN UNIVERSITIES

The selection of CST to explore quality in universities was a decision made on the basis of four factors: an intuitive understanding of systems thinking; serendipity; recognition of parallels between quality and CST; and a strong desire for creative thinking. Working as a senior administrator with particular responsibility for the design and development of quality systems within a university, the idea that processes, structures and people were 'interconnected' in ways that gave rise to variable outcomes was territory with which I was familiar. In my day-to-day work of identifying linkages and exploring likely consequences of new developments within my organisation I was intuitively thinking 'systemically' about the relationships within and between systems in a university setting. Serendipity also played a part in the form of a close colleague and mentor who was actively investigating the use of CST and 'opening my mind' to systems theories and concepts.

Further justification for the use of CST was based on a perceived alignment between the research premises described in the previous Chapter (i.e., that quality in universities is systemic and complex requiring multiple perspectives to examine the purposes, values, assumptions and power relations operating within the context) and the core themes of CST (critical awareness of the context, a focus on improvement and a pluralist approach to the use of tools and methods). The rationale was reinforced by the possibility that the application of CST to quality in universities could result in enhanced understanding of both quality and CST: in relation to quality, CST representing a novel approach that could provide new insights; in relation to CST, investigating quality assurance presenting an opportunity to expand on the general ideas of CST with 'how to go about it'.

The final reason for the selection of CST was a desire for creative thinking. As noted in the previous Chapter the implementation of quality assurance in higher education has been largely driven externally and in a manner that often requires reporting within a particular framework or in accordance with a specified model or template. Having worked within this model for a number of years, I was ready to embrace an alternative approach that encouraged creative and constructive thinking without adhering to a particular process, structure or methodology. Not only did CST fulfil this criterion, but it also provided a framework within which conclusions or outcomes could be examined and tested.

In selecting CST as the framework for the study, I also undertook to demonstrate coherent use of systems tools and methods (pluralism) for 'exploring a territory' (critical awareness) for the purpose of advancing the research objectives, or at the very least framing better questions for future studies (improvement). The following sections describe my approach to the use of CST for investigating quality assurance in universities.

DESIGNING THE STUDY

To a self-confessed novice, designing a study based on CST and having to navigate the theories, methods and methodologies associated with TSI was a daunting prospect. Add to this the published literature on quality and higher education and the difficulty of establishing 'where to begin' was almost enough to persuade me not to! However, spurred on by the completion of a similar study by Houston (2007b) that used a critical systems approach to explore quality in the particular context of an academic unit, and the advice of Flood (1999; 2000) to 'just begin', a critical systems approach to the exploration of quality assurance in universities slowly evolved.

Flood (1996) described the idea of 'being systemic' as bringing together different points of view, exploring tools and techniques, identifying issues, choosing approaches and engaging in critical reflection about the process followed. A qualitative approach was thought to be an appropriate way to begin this kind of 'open' exploration given alignment between the ideas of Flood (1996) and the purposes of qualitative research described by Patton (1990) and Strauss & Corbin (1998) namely: examining participants' perspectives, eliciting information regarding values and assumptions, and striving to better understand the interactions occurring in-situ.

The context of the study was global and included higher education systems, universities, disciplinary communities and funding and regulatory systems (Figure 2). Accepting the 'problem' of gathering information on participants' perspectives from such a broad context and within the bounds of doctoral research, I made a pragmatic decision to focus the empirical part of the investigation within a national context (New Zealand) and examine a hierarchy of views on quality and universities. Also accepting that this approach would provide a (very) limited representation of the context, published literature from the past 30 years regarding quality management, higher education and the relationship between them provided the means for examining participants' perspectives from the wider context. The idea of combining different methods and approaches within the study was consistent with the core theme of 'pluralism' in CST and also with the concept of 'triangulation'. Jick (1979) observed that through the use of a range of techniques to collate and analyse data, a more contextual and holistic study could be achieved. Triangulation could also enhance creativity (a cornerstone of TSI) as different pieces of the study are shaped and organised to form a coherent picture of the whole using ingenuity in data collection and perceptive analysis.

Consequently, the initial stages of the research were consumed with information gathering using qualitative methods. It is important to make clear that there were two strands to this process which proceeded simultaneously: the development and implementation of procedures for gathering 'participant views of quality and universities' within the New Zealand context, and a much wider exploration of perspectives on quality assurance, higher education and their intersection drawn from the literature.

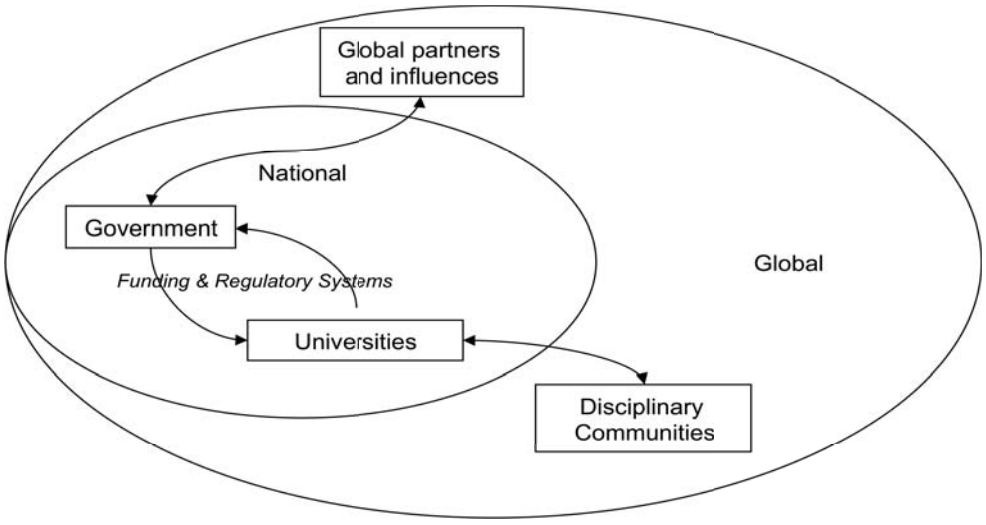

Figure 2: The broad context for the present study of quality assurance in universities

GATHERING PARTICIPANTS' VIEWS

Use of a case study

Yin (1994) described the main benefit of case study approaches in terms of their ability to capture a real-world context where phenomena interact in complex and variable ways. Strauss & Corbin (1998) observed that the use of a case study had particular merit in circumstances where the intention was to gain insight and enhance understanding of an issue. Selection of a case study within the proposed research design was for these reasons, and because of its alignment with the first premise of the research that proposed quality as being underpinned by local, national and international understandings transcending disciplinary, institutional, economic and political boundaries.

One of the limitations of case studies relates to the ability to generalise findings from one context to another (Strauss & Corbin, 1998) and particular attention must therefore be paid to questions of data validity and reliability (Yin, 1994). These issues were addressed within the design and implementation of the study through triangulation of the empirical data and analyses with findings and perspectives drawn from an 'expanded dataset' described later in the present Chapter. The research protocols reported in this Chapter also formed an integral component of assuring the reliability of the study.

Use of interviews

Interviews were selected as the primary method for eliciting and exploring participant views of quality and universities. The questions used partially replicated those used by Houston (2007b) in his case study of quality in the context of an academic unit within a university, but were adapted for application to a wider audience that included participants from different levels of the university system (see Participant Selection in the following section). Partial replication of the questions also provided a means for comparing participant responses

across the two case studies. Preparation of the questions also proceeded in the manner recommended by Yin (1994) and Strauss & Corbin (1998) in that the initial review of the literature and the premises and objectives of the research summarised in Chapter 2 provided the basis for areas to be investigated. Care was taken to ensure the design of the questions was sufficiently open-ended so that participants could express their views relatively freely and present the images, assumptions and values they believed were important. The questions that were used with respondents are presented in Table 5. It is useful to note that while all the questions were applied to all participants, the sequence sometimes varied depending on the responses given. For example, a number of participants answered a range of questions within one response so the sequence of questions was adjusted accordingly.

Table 5: Questions Developed to Explore Participant Views of Quality and Universities

Question		**General Purpose**
1	What is a university like? How would you describe it to someone who had never been there to give them a feel for what it does?	Generation of creative and metaphoric images of a university. Exploring the purpose of a university and the values that operate.
2	What do you think is the most important work done at a university? (a) How do you think this question would be answered by those at other levels of the sector?	Enabling comparisons of what is valued with the responses to later questions which examine 'what is done'. Providing a means to explore definitions of quality which operate in the context. Question 2(a) enables identification of perceived and actual convergence or divergence in participant perspectives.
3	How would you define quality in relation to what the university does?	
4	What do you think are the main quality issues facing universities?	Informs definitions of quality in addition to perceptions regarding areas for improvement.
5	What do you think should be done to improve quality in universities?	
6	What kind of information would you use to judge whether quality was improving, declining or remaining constant?	Intended to elicit ideas regarding measures and the measurement focus.
7	How does your role fit in relation to the broader work of the university	Provides information regarding the roles of participant groups and the means to explore their inter-relationships.

8	When I use phrases such as 'academic quality advancement or quality assurance' — what sort or images come to mind?	Generation of creative and metaphoric images of quality.
9	New Zealand universities have been involved in a number of quality assurance initiatives since the early 1990s. What effect do you think each of the following have had on teaching and research? Academic Quality Audits Performance indicators Benchmarking Risk management Strategic planning Performance based research funding Course approval and accreditation	Provides an opportunity to explore the relationships between some of the major initiatives advanced in the name of 'quality assurance and improvement' and the reported values, definitions and purposes operating in the context.
10	In relation to universities, quality has often been defined as "fitness for purpose". What do you think this means?	The validity of this definition can be explored in comparison with those reported by participants.
11	Do you think a university has 'customers', if so who are they?	Facilitates exploration of what 'fulfilling customer needs' could mean in the university context.
12	Do you think the university has a culture of improvement? What are the reasons for your answer?	Enables examination of the factors that contribute to improvement.

Participant selection

Becher & Kogan (1980) described different 'levels' within the higher education system where groups tended to share values and functions: individual academics, academic units, the university and the 'central authority' (broadly defined as the government or policy making agencies charged with steering the higher education system). These levels have since formed the basis for a number of studies such as the impact of policy changes on universities and academic staff (Parker & Jary, 1995; Brennan & Shah, 2000; Henkel, 2000; 2004; Hernard, 2010) and the indicators of education processes and outcomes examined regularly by the OECD (2008b). For the purposes of the present study the levels identified by Becher & Kogan (1980) were used to inform a purposive sample of participants from which to gather information. The participants, together with the reasons for their selection and sampling are presented in the Table 6.

Table 6: Research Participants and Selection Rationale

Participants	**Selection Rationale**	**Sample**	**Sample Rationale**
Academic staff	Have primary responsibility for the core activities of a university namely research and teaching.	Approximately 10 academic staff who are members of a university's Academic Board, or familiar with academic approval and review processes.	Staff representatives who have direct involvement with the academic approval and review processes are likely to have a deeper understanding of sector issues, university processes and quality assurance requirements.
University middle management (department or faculty heads)	Responsibilities in relation to the local coordination and management of research and teaching.	Approximately 5 department or faculty heads at a university.	The population of middle managers is smaller than academic staff so a smaller sample size was selected. The sample provided representation from this group while maintaining a manageable number of interviews.
University senior management	Responsibilities in relation to the achievement of university-wide goals in relation to research and teaching.	Approximately 3 members of the senior management team of a university.	The population of senior managers is smaller than middle managers so a smaller sample size was selected. The sample provided representation from people who have a responsibility for maintaining a university-wide perspective.
Tertiary education sector representatives	Responsibility for implementing sector-wide strategies and goals including advice on policies, priorities and sector performance.	Approximately 3 members of an organisation affiliated with sector performance.	Sector representatives have responsibility for maintaining sector-wide perspectives. The same sample size as that described for senior managers ensured their representation while maintaining a manageable number of interviews.

The process for identifying individual research participants began with a letter of introduction sent to the Vice-Chancellor of a New Zealand university and two Chief Executives who led the government agencies responsible for tertiary sector policy implementation and monitoring. The University approached for the study was a

comprehensive university with a good reputation for research and teaching located in a city that was relatively easy for the researcher to access. While the researcher's university of employment may have been a more convenient site for the study, established and ongoing relationships with potential participants could have introduced artefacts which were avoided if an external site was available.

In each case approval to proceed with the study was provided and the Vice-Chancellor and Chief Executives identified alternative contact persons to facilitate access to the appropriate locations and assist with the identification of individual participants. During this stage of the research formal application was also made to the Human Ethics Committee of the researcher's university which provided specialist peer review of the research procedures including those for the provision of information, obtaining participant consent and data management. The Committee approved the research procedures with no amendments.

A face-to-face meeting was then held with the primary contacts at the research sites who assisted with the identification of specific individuals who fit the selection and sample rationales in Table 6. Each prospective respondent was sent a personal letter of invitation to participate in the study and a generic information sheet summarising the research procedures (Appendix 1). Only one person declined an interview so the final sample of respondents comprised 23 individuals including:

- ten academic staff from a variety of disciplines within the selected university;
- seven heads of department representative of 'middle management' across a range of disciplines within the selected university;
- three senior managers from the selected university; and
- three representatives from units responsible for tertiary strategy, policy and performance monitoring on behalf of the government.

Collection of interview data

Individual interviews were conducted with each participant at a time and location of their choosing over a period of two months in 2005. The interviews followed a semi-structured format using the questions presented previously in Table 5. The duration of each interview varied from one to two hours and all participants consented to their interview being audio taped. Detailed field notes were taken during each interview to record questions or clarifications sought by respondents and to highlight particular areas emphasised by the participant.

After the first five interviews had been completed the field notes and audio tapes were reviewed to examine whether the interview questions were eliciting information in line with their purposes (Table 5), and whether there were any other issues arising from the responses that required further exploration during the study. The field notes suggested that there were no particular issues associated with understanding the questions or providing a response.

Review of the audio confirmed that the participants were responding freely, exploring images and following threads both within and across the question set: the questions appeared to be eliciting information and prompting the respondents to explore their own views of quality and of universities.

Each interview was fully transcribed by the researcher. After each transcription was completed the relevant field notes were examined to see whether any additional footnotes were required but this was unnecessary in a majority of cases.

Collation and analysis of interview data

The transcribed interviews provided the basis for a multi-level analysis of the interview data. Participant responses to each question were summarised and quotations were selected to illuminate key points and capture the context of the response. Each participant was given a unique identifier (i.e., the prefix "A" used for academic respondents, "M" for Middle Managers, "S" for Senior Managers and "CA" for representatives of the Central Authority) and the question summaries were collated in a simple table to facilitate comparisons within and between participant groups (Table 7).

Table 7: Collation of Interview Data by Question

Participant	Q1: University Images	Q2: Most Important Work…	... Q12 Culture of Improvement
A1	Summary of A1's response to Q1	Summary of A1's response to Q2	Summary of A1's response to Q12
…			
M1	Summary of M1's response to Q1	Summary of M1's response to Q2	Summary of M1's response to Q12
…			
S1	Summary of S1's response to Q1	Summary of S1's response to Q2	Summary of S1's response to Q12
…			
CA1	Summary of CA1's response to Q1	Summary of CA1's response to Q2	Summary of CA1's response to Q12
…			

A grounded theory approach (Patton, 1990; Strauss & Corbin, 1998) was used to analyse the emerging themes associated with each question and within each participant group. This process involved, in the first instance, a vertical analysis (refer Table 7) to identify areas of convergence and divergence within the responses. These areas were then combined in a series of question 'Summary Sheets' which provided the basis for generation of a 'descriptive story' of academic, middle manager, senior manager and central authority question responses. The descriptive story was then used to explore the images and perspectives within and between participant groups regarding 'the university' and 'quality'

by integrating the question responses as outlined below. A summary of the analytical process applied to the interview data is presented in Figure 3.

- Responses from Question 1 (images of a university), Question 2 (most important work) and Question 7 (roles) were combined to investigate *what is valued* within the University;
- Responses from Question 3 (defining quality), Question 4 (quality issues), Question 5, (improving quality) and Question 6 (judging quality) were integrated to investigate *what is required* to define, improve and evaluate quality in the University; and
- Responses from Question 8 (images of quality assurance), Question 9 (particular initiatives advanced in support of quality), and Questions 10 and 11 (fitness for purpose and customer definitions) were integrated to investigate *what is being done* with respect to quality in the University.

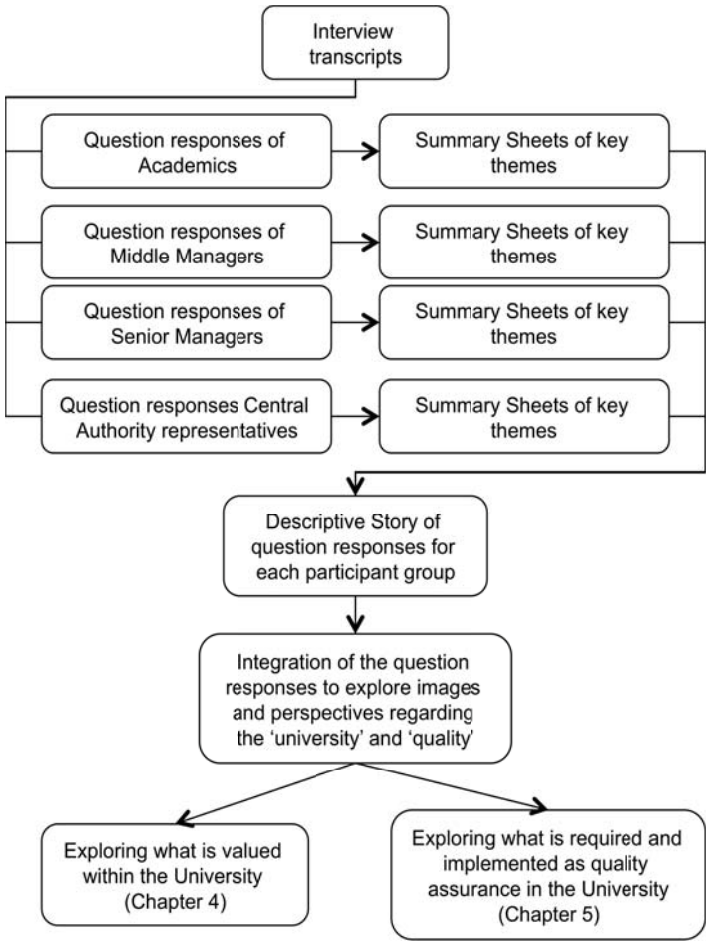

Figure 3: Summary of the analytical process applied to the interview data

EXPANDING THE DATASET TO BROADEN PERSPECTIVE

Accepting that any case study can only provide a partial representation of the ideologies, issues and interactions occurring within a system, ongoing attention was paid to 'sweeping in' as much information about quality and higher education as was practicable, so that multiple perspectives within and across the higher education system(s) could be included (after Churchman, 1979; Midgley, Munlo & Brown, 1998; McIntyre, 2004). In some respects the 'sweep' could be thought of as a literature review that began with a search for articles containing the keywords 'quality' and 'higher education' between 1980 and 2008. However, the literature review was ongoing for the duration of the research, informing and being informed by the emerging themes from the interviews and the findings generated from the application of systems methods. A process of 'threading' was also applied such that salient points of authors cited within publications of interest were traced to their source which was also 'swept into' the literature base that informed the investigation. Threading continued until I believed I had reached the point of 'theoretical saturation' (Strauss & Corbin, 1988, p. 292) where no 'new' information was being discovered. During this process, and over the course of the study, the following groupings emerged within this broader review process such that attention was paid to exploring:

- the nature and purposes of higher education;
- quality assurance in higher education;
- quality and its adoption and implementation in business organisations; and
- the transferral of quality management from business organisations to higher education.

The outcome of the sweep could be crudely described as a small mountain of books, articles, papers and online publications. Each source was examined, a summary of issues and findings recorded, and direct quotations transcribed to capture the key points. Approximately 500 pages of text were generated during this exercise and this provided the means for expanding the initial dataset and engaging with multiple perspectives regarding quality and universities.

IMPLEMENTING A CRITICAL SYSTEMS APPROACH

Information obtained from the interview process and broader review provided a rich data set for exploring quality and universities, purposes and systems methods as advocated by Flood (1996). Implementation of the critical systems approach evolved iteratively as themes from the interviews were uncovered and parallels within the expanded dataset identified. Table 8 summarises the intended tasks as they were broadly conceived at the outset of the study and the tools and processes used to advance them over the course of the research. At all stages of the process the core themes of CST (critical awareness, a focus on improvement and pluralism) and TSI modes (creativity, choice and implementation) provided an overarching framework for creative thinking about the achievement of the research objectives. The tools

and processes identified in Table 8 represent the final 'package' of systems methods. Because procedures for the collection and analysis of the interview data have already been detailed, attention now turns to a description of the rationale for, and application of, the other tools: metaphor analysis; systems windows; systematic boundary critique; and VSM.

Table 8: Summary of the Critical Systems Approach to Quality Assurance in Universities Applied in the Present Study

Task	**Tools and processes**	**Relevant CST Themes & TSI Modes**
Establishing the means to understand 'the whole'	Interviews Expanding the dataset	Critical awareness, a focus on improvement and pluralism each incorporating creativity, choice and implementation components
Developing an understanding of the 'whole'	Grounded theory analyses of the interview data within and across participant groups Metaphor analysis Applying Systems Windows	
Identifying new directions for the improvement of quality	Systematic Boundary Critique VSM Applying Systems Windows	
Being 'critical'	Self-reflection The role of intuition	

Metaphor analysis

Morgan (1997) introduced the idea that the images and metaphors underpinning organisation and management theory could be used to provide insight into the way in which organisations operated. Jackson (2000) deliberately built the ideas of Morgan into the application of TSI to support creative thinking about a problem context and to provide insight into the 'choice' of systems methods likely to guide appropriate interventions. An approach to metaphor analysis was described by Jackson (2003) in terms of thinking about the main issues or concerns that common metaphors highlighted in relation to an organisation or problem. The common metaphors identified by Jackson (2003) were added to those advocated by Flood & Jackson (1991b), Daellenbach & McNickle (2005) and Morgan (1997) to yield the list of metaphors used in this study (Table 9).

Table 9: Metaphors Used to Explore the Expanded Dataset

Metaphor	**Description of features**
Machine	Highly coordinated and bureaucratic in terms of command and control procedures. Clear tasks and a stable environment support consistency and standards. Largely non-adaptive and often associated with manufacturing based models of organisations.

Organism	Interrelated and interdependent subsystems contribute to a greater whole. Flexible, adaptive and needs driven. Requires an understanding of the interactions between systems and sub-systems and with their external environments.
Brain	Focuses on systems as learning entities, gathering and processing information to seek and direct goals. Adaptive and decentralised with subsystems that are semi-autonomous.
Culture	Applicable in contexts where the values, beliefs and understandings shared within the system could be viewed as a defining feature of the whole.
Political	Focuses on the use of power to advance particular ideologies or achieve specific goals. Power can be exerted in many ways such as economically, through regulation, or via the withholding of information.
Coalition	As a subset of the political metaphor, refers to individuals who form groups to advance particular ideologies or values.
Domination	Also a subset of the political metaphor but used in a stronger sense as a means to describe problem contexts where one or more sub-systems are deliberately and continually undermined by others.
Psychic Prison	Refers to systems where particular ways or thinking or behaving have become entrenched to the extent that they restrict adaptation and innovation.
Flux and Transformation	Prompts thinking about the impact of constant change within the system and in terms of the wider operating environment. Dynamic contexts could demand flexible and adaptive systems.

Data for the metaphor analysis was collected from the expanded dataset of publications in order to investigate assumptions, meanings and approaches to the application of quality assurance in higher education. During the process of examining, summarising and extracting key points from each publication time was taken to reflect upon, and record, the metaphors most closely associated with the content. The broad groupings of 'the nature and purposes of higher education' and 'quality assurance in higher education' provided the basis for collating the number of occurrences of each metaphor as a raw total, and as a proportion of the total occurrences within each broad theme. Through this process insights could be gained regarding the 'dominant' and 'dependent' metaphors associated with quality assurance and higher education. The outcomes of the metaphor analysis are presented in Chapters 4 and 5.

Systems windows

Flood (1995) observed that through TSI organisations could be understood as wholes if they were examined according to four dimensions or 'windows': systems of process, systems of structure, systems of meaning and systems of knowledge/power (Table 10). He argued that

creative insight into issues or dilemmas within a problem context could be enhanced when each window was 'opened' and the related elements examined (Flood, 1999).

Table 10: Flood's Systems Windows

Systems of Process *Exploring operational flows and ways of working*	**Systems of Structure** *Exploring functions and the rules and procedures for control and coordination*
Systems of Meaning *Exploring values, norms, ideologies, and culture*	**Systems of Knowledge/Power** *Exploring power relationships arising from politics, 'valid' knowledge and knowledge holders*

Systems windows were selected for this study primarily due to their alignment with the research premises discussed earlier. While the processes and structures for quality assurance were relatively well documented, their meaning, values and underlying assumptions remained a point of contention and appeared to be inconsistent with those of higher education. Another reason for the use of systems windows could be traced to the suggestion by Banathy & Jenlink (2004) that a structure/function and process/behaviour model would be advantageous in an exploration of education systems.

Opening each system window on 'quality' and 'higher education' was an iterative process implemented in two main phases of the research. The windows were first applied to the expanded dataset in a process similar to that described previously for Metaphor Analysis. Individual articles were summarised according to the systems windows they explicitly addressed, and the literature streams examined to explore which windows had been opened more frequently than others. For example, a number of publications relating to quality assurance focused primarily on the processes and structures associated with its use with only superficial attention (if any) paid to the meaning of quality assurance or the systems of knowledge/power that were present. Findings from the application of systems windows are presented in the following two Chapters alongside the Metaphor Analysis to provide alternative optics from which to view the literature and triangulate the findings.

The second application of systems windows was entirely unanticipated and did not occur until I attempted to integrate information from the case study, the expanded dataset and application of systems methods. While trying to make sense of 'the mess' that comprised the literature streams and participant responses, *and* striving to communicate the outcomes in a concise and informative manner, it struck me that the windows provided a framework upon which to base the substantive Chapters of the thesis. Not only did the windows provide a mechanism to highlight issues and dilemmas operating in the context, they also provided the

means to integrate the 'mess' within a coherent and structured framework. This approach is made operational in Chapters 4 and 5.

Systematic boundary critique

Systematic boundary critique is a central requirement of systemic intervention (Midgley, 2000; Ulrich 2003; 2005). The contributions of boundary critique to the core themes of CST have been described by Ulrich (1994; 2001; 2003), Midgley (2000), Flood (1999) and Midgley & Ochoa-Arias (1999) and can be summarised as follows:

- boundary critique contributes to critical awareness through the identification of boundary judgements that can expose the convergence or divergence of participant perspectives regarding who and what is valued in the particular context;
- boundary critique contributes to definitions of improvement as the meaning of improvement in any problem context is dependent on participants' points of view; and
- boundary critique contributes to pluralism in terms of providing an evaluation of the problem context that can inform methodological choice.

Boundary critique begins from the premise that judgements made by individuals and groups about what is 'in' a system and what lies 'outside' are determined by the knowledge and values they consider to be important (Midgley 2000; Houston 2004). The process of boundary critique exposes these 'boundary judgements' in a way that highlights the partiality of particular perspectives and explores the possibilities offered by alternate views (Ulrich, 2005). For example, exposure of conflicting boundary judgements can provide a basis for challenging controversial claims or providing different participant groups with an appreciation of the facts and values held by others (Ulrich, 2005). In his discussion of boundary critique Midgley (2000) described the idea of 'marginal areas' that existed between boundaries in instances where the boundary judgement of one group is narrower than that of another. In such cases, "the situation tends to be stabilised by the imposition of either a *sacred* or a *profane* status on marginal elements" [emphasis in original] (p. 143) which give rise to social ritual. Ritualistic behaviour involves superficial acknowledgement of marginal areas to preserve the status quo rather than resolving areas of conflict.

One of my early attempts to grasp the ideas associated with systematic boundary critique was presented in Paewai (2005). I observed tensions reported in the literature between 'corporate' versus 'collegial' approaches to management in universities (Karmel, 1990), and the tendency for disputes to arise due to differences in the approaches to decision-making by 'management' and 'the professoriate' (Sharrock, 1999). I proposed that the conflict between the groups could be traced to their socially constructed boundaries—the collegial approach setting the boundary wide to encompass the needs of students, staff, professions and the priorities of academia, and the management approach narrowing the boundary to institutional requirements and economic realities. One of the outcomes of this boundary variance was

suggested as being the imposition of a profane or sacred status on collegial decision-making depending on which boundary set one subscribed to. In this situation, social rituals could include the superficial involvement of 'stakeholders' (e.g., students and academic staff) in collegial approaches to decision-making when the outcomes are largely determined by the financial resources available.

The implementation of systematic boundary critique to quality assurance in universities was aligned with the research premise that diverse stakeholders may hold different conceptions of quality based upon their ideas about the value and purposes of higher education. In addition, there are clear parallels between boundary critique and quality management in terms of definitions and meanings of improvement. However, improvement identified through the process of boundary critique leaves open the possibility of different understandings of improvement operating at different levels within the system (Churchman, 1971).

The application of boundary critique involves the use of Ulrich's 12 boundary questions (1987; 2005; Table 11). The questions advance the idea of deliberative and democratic evaluation (House & Howe, 1999) with explicit recognition of four stakeholder groups: clients (who are served by the system); decision-makers (who control the system); experts (who influence the decision-makers); and observers (who are affected by the system but not directly involved) (Flood, 1999; Daellenbach & McNickle, 2005).

For this study the information obtained from the participant interviews and the expanded dataset was used to formulate responses to Ulrich's boundary questions. There appeared to be little guidance from the literature regarding this process except that the questions needed to be asked and answered in relation to the present situation (the 'is' mode) and the preferred, or ideal, one (the 'ought' mode). Mindful of this general instruction, Ulrich's questions were applied to the findings from the interviews and the expanded dataset in relation to two separate reference systems ("quality" and "the university"). Contrasts between the 'is' and 'ought' modes were achieved by using the findings to compile responses regarding the 'actual' and 'ideal' states of the system (Ulrich, 1987; 2005). Comparing and contrasting the actual and ideal states of the two reference systems provided the foundation for an analysis of 'fit' between the intended and actual purposes and values of quality relative to those of universities. This process was also used to enhance understanding of the level of involvement of various stakeholders and their capacity to engage meaningfully in the design, development and implementation of quality assurance in universities. The outcomes of the boundary critique appear in Chapters 4 and 5, and the full set of questions and responses for each of the reference systems are provided in Appendices 2 and 3.

Table 11: 12 Boundary Questions Illuminating the Reference System (Adapted from Ulrich, 1987, p. 108 and Ulrich, 2005, p. 11)

Boundary Categories	**Boundary Issues**	
1. Who is/ought to be the client of the system to be designed or improved?	**Sources of Motivation:** who contributes the sense of direction and values? What purposes are served? Whose purposes are they?	**The Value Basis**
2. What is/ought to be the purpose of the system; i.e., what goal states ought the system be able to achieve so as to serve the client?		
3. What is/ought to be the system's measure of success (or improvement)?		
4. Who is/ought to be the decision-taker, i.e., have the power to change the system's measure of improvement?	**Sources of Control:** who contributes the means, resources and decision authority? Who ought to have the power to decide?	**The Basis of Power**
5. What components (resources and constraints) of the system are/ought to be controlled by the decision-taker?		
6. What resources and conditions are/ought to be part of the system's environment, i.e., should not be controlled by the system's decision-taker?		
7. Who is/ought to be involved as designer of the system?	**Sources of Expertise:** who contributes the design skills and knowledge of 'facts'? Who has the knowledge to do it?	**The Basis of Know-How / Knowledge**
8. What kind of expertise is/ought to flow into the design of the system, i.e., who ought to be considered an expert and what should be his/her role?		
9. Who is/ought to be the guarantor of the system, i.e., where ought the designer seek the guarantee that his/her design will be implemented and will prove successful, judged by the system's measure of success (or improvement)?		
10. Who is/ought to belong to the witnesses representing the concerns of the citizens that will or might be affected by the design of the system? That is to say, who among the affected ought to get involved?	**Sources of Legitimation:** who represents the concerns of the affected? Who contributes the self-reflection and responsibility among the involved? How do the involved deal with different world-views of the affected?	**The Basis of Legitimation**
11. To what degree and in what way are/ought the affected be given the chance of emancipation from the premises and promises of the involved?		
12. Upon what world-views of either the involved or the affected are/ought the system's design be based?		

Viable systems modelling

Viable Systems Modelling (VSM) arose from the work of Stafford Beer (1979; 1981; 1985) who posited that organisational viability was directly related to the performance of five key functions (Table 12): implementation of the core business; coordination of the implementation function; control of the operations through, for example, distribution of resources; intelligence gathering from the wider environment in which the organisation exists; and finally a policy function which establishes the strategic direction of the organisation. The key, he argued, was to ensure that the functions were effectively interrelated with information flows and feedback loops that enabled people to understand, interpret and take action on the basis of information received. Interrelationships between the organisation and the wider environment (or system) in which it resides are captured by the idea of recursion such that each viable system is itself part of another viable system (Beer, 1985). The five key functions and their relationship within organisations are shown in Beer's Viable Systems Model (Figure 4).

Table 12: The Five Functions Required in Viable Organisations

Function	**Description & Purpose**
Implementation (System 1)	Carries out the primary functions of the organisation. Can exist independently as a self-organising entity within the wider system and has direct connections to the external environment.
Coordination (System 2)	Enhances coordination and cooperation within System 1, and places constraints on System 1 to ensure alignment with the wider organisation. System 2 includes processes and activities that connect System 1 with the regulatory frameworks operated by System 3.
Control (System 3)	Allocates resources and personnel, and monitors and audits the implementation of policy. Provides an essential conduit between Systems 1 and 4.
Audit (System 3*)	Carries out the audit function of System 3, gathers information directly from System 1 to inform System 4.
Intelligence (System 4)	Analyses the Systems and the environment to provide essential information to all areas. Includes information gathering, reporting and modelling to identify opportunities and risks. System 4 must act as an effective filter so that Systems 5 and 3 only receive the most pertinent information. System 4 has an important analytical role, as opposed to simply collating data.
Policy (System 5)	Sets the strategic direction of the organisation in response to the relevant information from Systems 1 to 4. System 5 uses information from System 4 to devise the policies to be implemented by System 3. System 5 also represents the organisation in the wider environment.

Beer proposed the Viable Systems Model as a diagnostic tool for examining organisations according to their ability to link the functions of Systems 1-5 and to perform them effectively (1979; 1981; 1985). As a systems tool VSM can be used to diagnose deficiencies within and across the functions of an organisation in order to highlight system 'faults'. Three of the most common faults identified in the literature are listed below (Beer, 1985; Flood & Jackson, 1991b; Flood, 1993; Jackson, 2000; Goodyer, Houston & Neitzert, 2008):

- any one of the systems is absent or poorly implemented;
- linkages between the systems are broken or malfunctioning; and
- Systems 2, 3, 4, or 5 are not supportive of System 1 and in some cases seek to establish themselves as a separate viable system (a phenomenon known as 'autopoiesis').

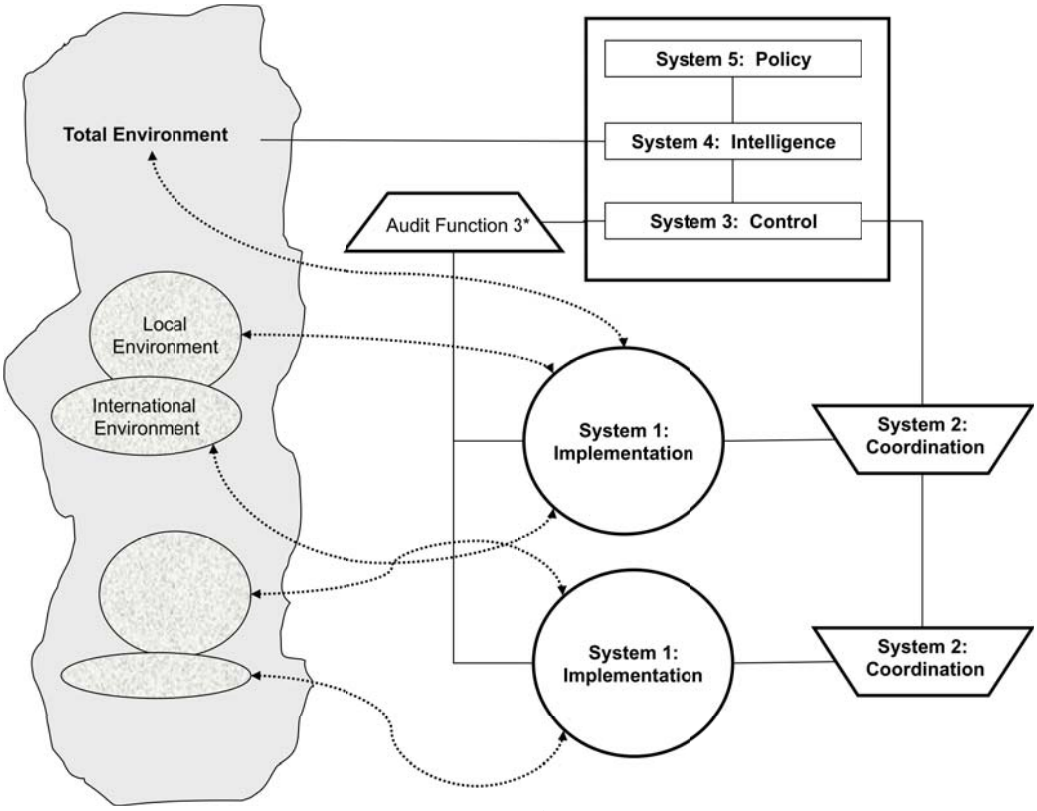

Figure 4: Beer's viable system model

The selection of VSM as a tool to enhance understanding of quality in the university system was not finalised until after each of the systems windows had been opened on the nature and purposes of universities (Chapter 4) and quality assurance (Chapter 5). At that stage of the research it became clear that something was needed to help conceptualise the integration of quality assurance within the university system (Chapter 6) and prompt creative thinking about how the quality assurance system could be improved. Serendipitously, it was also at that stage that Flood's assertion regarding quality and VSM was discovered during the review of his work: "many of the key issues vital to quality management are catered for in the VSM" (1993, p. 116). It is useful to observe (albeit in retrospect!) that this general

approach was entirely consistent with the use of VSM prescribed by Flood & Jackson (1991b) in terms of advancing understanding of the system's structures, functions and operation prior to diagnosing the system by exploring each of the systems and their interrelationships.

Use of self-reflection

Self-reflection provides a means of exploring the role of the researcher within the research context and identifying the assumptions and perspectives they bring to the inquiry (Alvesson & Skoldberg, 2000; Loughran, 2002). Richards (1991) described the process of reflection as a purposeful one involving "conscious recall and examination of the experience as a basis for evaluation and decision-making and as a source for planning and action" (p. 1). In the present study self-reflection is explicitly noted as a research method and crafted 'purposefully' in accordance with the propositions of Ulrich (2001) that a 'competent' systemic researcher should explore:

- their own competence as a researcher;
- the ways in which the research procedures contribute to understanding within a systemic framework (in this case CST); and
- the contribution of the research findings to practical recommendations for improvement within the problem context.

Self-reflection was ongoing throughout the research and essentially involved me questioning myself about the values and assumptions I brought to the problem context, whether the process of observation, reflection and communication of findings could constitute an intervention, and whether this was actually a *real* critical systems study! The outcomes of self-reflection are reported as sub-sections within each of the following Chapters and explored more fully with reference to Ulrich's aforementioned propositions in Chapter 6.

The role of intuition

Although it may appear unusual within a doctoral dissertation, reference must be made to the role of intuition (Midgley, 2000) and the significant part that it played in designing the critical systems approach and in determining how the tasks, tools and processes were interpreted and applied. For example, the way in which the metaphor analysis was conceived and implemented was essentially an intuitive process that began from an awareness of the 'mechanistic' nature of quality in business organisations, a desire to explore whether or not that nature had changed in the higher education context, and a limited number of interview transcripts from which to draw an informed conclusion.

Similarly, intuition also played a role in determining when to 'stop' exploring and 'start' integrating the outcomes of the various methods within a coherent and constructive framework that could inform system improvements. Reference is made here to the idea of 'theoretical saturation' proposed by Strauss & Corbin (1998) where the data collection phase

reaches a stage when "any new data would only add in a minor way, to the many variations of the major patterns" (p. 292). Nonetheless, the point at which 'theoretical saturation' is reached is essentially an intuitive one.

CONCLUDING COMMENT

This Chapter has summarised the systems frameworks, tools and methods selected to advance the objectives of the research within the particular boundaries imposed by the research premises. It is worth noting that any perception of linearity in the ways in which the research methods were conceived and reported is purely coincidental—the process of identifying tools and applying them in potentially useful ways was a creative and iterative one in accordance with the tasks and phases of TSI.

Attention is now drawn to the integration of the tools within a coherent framework for the explicit purposes of advancing understanding of universities, quality, and the ways in which their interaction could be improved. These are the outcomes of the critical systems approach reported and discussed in the remainder of this dissertation.

Chapter 4: The Nature and Purposes of Universities

In Chapter 2, I made the observation that in order to reconcile the fit between quality assurance and universities there was a need to examine the nature and purposes of universities, including the values and beliefs that operate at various levels of the university system. This is the aim of this Chapter. Multiple perspectives of universities are advanced within a framework provided by the systems windows (meaning, structure, process and knowledge/power), using findings from the literature, the case study, and the application of systems tools (e.g., metaphor analysis, boundary critique) to investigate their nature and purposes.

The Chapter is presented in three parts. The first part—a broad perspective on the nature and purposes of higher education—uses the literature to illustrate how universities strive to balance the social and economic interests of their stakeholders while advancing their primary mission of learning, through knowledge creation, preservation and transmission. This includes an examination of the roles and functions of particular elements within the higher education system (government, universities, academic units, individual academic staff, disciplines), and discussion of the complex processes and their interactions which advance a university's mission (teaching, research, their interdependence and collegial and managerial decision-making).

The second part of the Chapter uses findings from the case study to provide a localised perspective on the broader views canvassed in the literature. Images of the University highlight the political and cultural dimensions of university life, and reinforce the importance of teaching, research and their integration as the foundations for achieving the University's mission. Systematic boundary critique and self-reflection contribute to a process of integration, analysis and review of findings in the final part of the Chapter.

Part I: A broad perspective including information regarding the New Zealand context

PURPOSES, VALUES & SYSTEMS OF MEANING

The ideas of Cardinal John Henry Newman (1852) and Wilhelm Von Humboldt (cited in Knoll & Siebert, 1967) regarding the purposes and functions of higher education remain dominant in many universities operating today (Lucas & Boulton, 2008). Cardinal Newman conceived a university as a place primarily for the cultivation of the intellect through disciplined inquiry for the betterment of the individual and his contribution to society (Newman, 1852). Wilhelm Von Humboldt's university (established at the University of Berlin in 1810) was a place where truth could be sought for its own sake and without societal or political interference (Knoll & Siebert, 1967).

Universities subsequently embraced each of these ideas in terms of the dual functions of research and teaching for the purposes of knowledge creation, preservation and transmission

(Karmel, 1990; Callan, 1998; International Association of Universities, 1998; Coaldrake & Stedman, 1999; Bradley, Noonan, Nugent & Scales, 2008; OECD, 2008a). There appears to be general agreement in the higher education literature that universities are places of advanced learning which build upon the knowledge of previous generations within and across multiple disciplines to enhance understanding of ourselves and the world in which we live (Codd, 1997; Bowden & Marton, 1998; Becher & Trowler, 2001; Malcolm & Tarling, 2007; Lucas & Boulton, 2008). Bowden and Marton (1998) argue that learning is in fact the core mission of universities "for individuals (through knowledge being formed which is new to a particular person), for humanity (through knowledge being formed which is new in an absolute sense) and for communities (through knowledge being formed for specific purposes)" (p. viii).

While the purpose of universities as 'centres for learning' is relatively uncontested, there is an ongoing debate about who is, or should be, the ultimate beneficiaries of that learning. Tensions exist between the generation, preservation and transmission of 'knowledge for its own sake' and some of the more contemporary discourses which favour 'knowledge that is useful' (Brennan et al., 2008; Lucas & Boulton, 2008). The question of utility is value-laden and can be examined with respect to three schools of thought: the pursuit and extension of knowledge as an end in itself (after Humboldt); engendering knowledge that extends individuals and equips them for a variety of roles in society (after Newman), and more recently, the advancement of knowledge that is useful for economic success (NPM).

The role of higher education in relation to economic prosperity and the so-called knowledge economy is a subject of increasing interest primarily for governments who seek a tangible return on their investment (Salter & Tapper, 2000; Wolf, 2002; Lucas & Boulton, 2008; OECD, 2008a; Australian Government, 2009; MoE, 2009b). In this context the research function of universities is perceived to be of particular value given reports of a positive relationship between research transfer, innovation and economic growth (Henkel, 2000; Appleseed Inc., 2003 cited in NZVCC, 2006; Bradley et al., 2008; Brennan et al., 2008). Similarly, the outcomes of the teaching function in terms of the proportion of a population with university qualifications have been correlated positively with labour productivity (Christensen & Laegreid, 2001; MoE, 2009a; 2009b). Intersecting these economic drivers are social outcomes generally related to improvements in the health and well-being of a population that has "higher average levels of education" (MoE, 2009b, p. 1).

At the crux of the matter is the complex interaction between the social and economic functions of universities: learning as a personal and professional pursuit versus the outcomes of learning as a commodity bought and sold on the labour market and for the benefit of the economy (Sassower, 2000; Henkel, 2000; Codd, 2006; Chalmers, 2007). It has been proposed that the social functions of higher education are marginalised in the economic environment (Readings, 1996) and academic self-governance undermined (Kerr, 1994). However, the observation could also be made that the overall mission of universities has not changed to any great extent in the past 200 years. The enduring purpose of

universities to advance learning through knowledge creation, preservation and transmission remains alongside drivers that seek to focus the production of knowledge for economic ends (Zemsky, 1993; Lock & Lorenz, 2007; Scott, Coates & Anderson, 2008). What has changed since the time of Humboldt and Newman is that the boundaries between universities and the local, national and international environments are now much more permeable (Henkel, 2000). Universities today must maintain an international reputation within a global network of higher education provision (Bradley et al., 2008). Consequently, higher education is increasingly subject to economic and socio-political shifts in the local, national and global environments (Chalmers et al., 2008). Thus the relationship between higher education and the stakeholders it can and does serve is much more dynamic than that envisaged by either Humboldt or Newman in their conceptions of a university; in addition, it is more complex than those which are envisaged in NPM. For these reasons, I propose that alongside the purposes of knowledge creation, preservation and transmission sits another function; that is, the purposes of universities should explicitly acknowledge the importance of negotiating the complementary and conflicting interests and values arising from stakeholder interactions.

The ability of universities to determine how they balance the needs of their stakeholders with the purposes of knowledge creation, transmission and preservation for its own sake and for the benefit of society is closely associated with the value they place on institutional autonomy and academic freedom. Indeed, institutional autonomy and academic freedom are widely perceived as a fundamental requirement of universities (Rectors of European Universities, 1988; Tasker & Packham, 1990; Bowden & Marton, 1998; International Association of Universities, 1998; Altbach, 2000b; 2009; Henkel, 2004; Coates, 2010). Lucas and Boulton (2008) argued that autonomy and freedom fostered a culture of enthusiasm, creativity, and innovation that engendered the commitment and engagement of academics and students in universities. Findings by Akerlind & Kayrooz (2003) supported a distinction between institutional autonomy and academic freedom in terms of the freedom of a university *to* engage with academic activities, and for academic staff to conduct teaching and research free *from* interference. Work undertaken at the UNESCO World Conference of Higher Education (International Association of Universities, 1998) defined institutional autonomy as

> *"the necessary degree of independence from external interference that the University requires in respect of its internal organisation and governance, the internal distribution of financial resources and the generation of income from non public sources, the recruitment of its staff, the setting of the conditions of study and, finally, the freedom to conduct teaching and research" (p. 2).*

Individual academics place great value on academic freedom which is reported as a key factor in academic job satisfaction (Clark, 1989; Coate, 1991; Akerlind & Kayrooz, 2003; Akerlind, 2005). Academic freedom places individuals in a position of trust, allowing them to self-manage their priorities in relation to teaching and research and follow areas of individual research interest (Clark, 1989; Adams, 1998; Henkel, 2000; Jones, Galvin & Woodhouse, 1990). In some respects academic freedom could be viewed as synonymous

with an absence of constraints placed on academic work (Akerlind & Kayrooz, 2003). However, there are constraints imposed in the mind of individuals (self-regulation), in relation to the discipline (a form of external regulation) and by a university and a nation which can act as enablers or disablers of academic freedom through the regulations and procedures they establish (Tasker & Packham, 1990; Taylor et al., 1998; Akerlind & Kayrooz, 2003). Thus academic freedom is a privilege that is earned subject to the demonstration of ethical and academic standards to communities at regional, national and international levels (Tight, 1988; International Association of Universities, 1998; Jones et al., 2000). The dichotomy of institutional autonomy and academic freedom alongside obligations to self-regulation, disciplinary requirements and accountability is part of the "openness to contradiction that is the genius of the university" (Lucas & Boulton, 2008, p. 3) and a "necessary prerequisite for successful research" (Meister-Scheytt & Scheytt, 2005, p. 94).

In terms of the values that academic staff hold in relation to the purposes of higher education it has been observed that an academic's motivation is typically driven by intellectual curiosity as opposed to material benefit (Akerlind, 2005; 2008). Formal recognition and reward received in the form of career advancement and peer esteem is often made on the basis of an individual's research as opposed to the endeavours of groups within academic units or the university (Becher & Kogan, 1980; Roffe, 1998; Adams, 1998; Kogan 1999). However, some studies of academics' motivation suggest that it is actually their teaching that provides the greatest sense of satisfaction (Henkel, 2000; Doring, 2002; Menon, 2003).

Purposes of universities in New Zealand

Universities in New Zealand exhibit the same characteristics and features described in the previous section. The purposes of all TEOs, including universities, are legislated in the Education Act (1989) (The Act) and subsequent amendments. The Act states that universities are "characterised by a wide diversity of teaching and research, especially at a higher level, that maintains, advances, disseminates, and assists the application of, knowledge, develops intellectual independence and promotes community learning" [Education Act, 1989, Section 162(4)]. This statement echoes the ideas of Newman, Humboldt and Bowden & Marton which are further explained in subsequent statements regarding the features of New Zealand universities:

- *"they are primarily concerned with more advanced learning, the principal aim being to develop intellectual independence;*
- *their research and teaching are closely interdependent and most of their teaching is done by people who are active in advancing knowledge;*
- *they meet international standards of research and teaching;*
- *they are a repository of knowledge and expertise; and*
- *they accept a role as critic and conscience of society" [Education Act, 1989, Section 162(4)].*

The tensions between the social and economic functions of education are also present in the New Zealand context. Again, the Act is specific about the social and economic functions of tertiary education sector which are to:

a. *"foster, in ways that are consistent with the efficient use of national resources, high quality learning and research outcomes, equity of access, and innovation;*
b. *contribute to the development of cultural and intellectual life in New Zealand;*
c. *respond to the needs of learners, stakeholders, and the nation, in order to foster a skilled and knowledgeable population over time;*
d. *contribute to the sustainable economic and social development of the nation;*
e. *strengthen New Zealand's knowledge base and enhance the contribution of New Zealand's research capabilities to national economic development, innovation, international competitiveness, and the attainment of social and environmental goals;*
f. *provide for a diversity of teaching and research that fosters, throughout the system, the achievement of international standards of learning and, as relevant, scholarship". [Education Act, 1989, 159AAA(1)].*

Not surprisingly, the purposes and functions of tertiary education presented in The Act pervade all subsequent education policy and strategy documents disseminated by the New Zealand government and associated agencies (e.g., TEC, 2007a; MoE, 2008b; 2009a). However, as indicated in the description of quality in New Zealand tertiary education sector (Chapter 2, p. 16), current government policy is framed by values that place the universities primarily in an economic context and discourse regarding the economic benefits of universities has arguably been expanding to an extent that marginalises the broader social functions (Watts, Herbison, Johnston & Myers, 1987).

Within the economic frame, the relationship between research transfer, innovation and economic growth is also a subject of increased scrutiny. A recent review of New Zealand Tertiary Education conducted by representatives of the OECD (Goedegebuure et al., 2007) linked industrial innovation with new knowledge generated within tertiary education and by the participation of tertiary graduates in industry. The Report also noted that New Zealand is largely dependent on the university sector for its research and development with universities responsible for over 60% of the nation's research outputs (2007). Perhaps as a consequence of this finding, the TES (MoE, 2009c) clearly prioritises research and postgraduate education in two of the three core roles of set out for universities in New Zealand:

- *"to undertake research that adds to the store of knowledge;*
- *to provide a wide range of research-led degree and postgraduate education that is of an international standard; and*
- *to act as sources of critical thinking and intellectual talent" (2009, p.18).*

There is also a clear focus in the TES on the need for TEOs in New Zealand to maximise the return on public investment for the purposes of economic growth and transformation (MoE, 2009c). The onus is placed on individual TEOs to improve student completion rates in the context of reduced Government funding; that is, "providers will need to manage costs,

continue to seek efficiency gains, ensure the qualifications they offer best meet student and employer needs and explore additional sources of revenue" (MoE, 2009c, p. 10).

In summary, the purposes of universities set out in the New Zealand Education Act (1989) generally reflect the purposes of higher education discussed in the broader literature. Instruments to interpret and guide the enactment of those purposes are increasingly framed by government values privileging economic benefit. Questions remain as to whether the long-term purposes of universities defined in the Education Act are more or less served by short-term strategy documents written in the context of more immediate political and economic drivers (Karmel, 1990).

ROLES, FUNCTIONS & SYSTEMS OF STRUCTURE

Systems of structure in higher education refer to the rules and procedures for the control and coordination of various functions. A basis for investigating systems of structure was provided by Becher & Kogan (1980) who proposed four 'levels' of the higher education system as an analytical framework for exploring and understanding its complexity. Each of the system levels was defined and differentiated according to individuals and groups that shared similar roles in terms of their values, functions and authority (Becher & Kogan, 1980):

- the 'central' level (government) which conducts the overall planning and monitoring of the system including the allocation of resources;
- universities within the system identified by legal convention or equivalent;
- 'academic units' which represent the discipline areas taught and researched at a university; and
- individual teachers, researchers and support staff.

The following sections examine the roles, functions and systems of structure in relation to the levels proposed by Becher & Kogan (1980), as well as a separate examination of 'academic units' and 'disciplines'. This distinction was made in order to explore and highlight any differences that might exist between the role and functions associated with 'disciplinary groups' and those to be found in more contemporary academic entities which may be multidisciplinary.

The central level: government

The role of government within the higher education system is primarily to steer universities toward achievement of goals most likely to benefit the nation (Becher & Kogan, 1980; Lucas & Boulton, 2008). Steering higher education involves four core functions (Becher & Kogan, 1980; Parker & Jary, 1995; Schmidtlein, 2004; OECD, 2008a; Gallagher, 2010):

- representing the views of various interest groups (e.g., industry representatives, employers, taxpayers and other potential users of higher education) and establishing education policies that will meet their needs within the national social and economic context;
- safeguarding the public interest by assuring that higher education is of an acceptable standard and delivered efficiently and effectively within a coherent system via regulatory frameworks and financial models and rules;
- reconciling the purposes and functions of individual universities with the policy directions articulated for the system at a national level via purchaser/provider agreements, explicit measures of performance and other NPM processes and techniques; and
- establishing agencies that foster achievement of the aforementioned functions.

Systems of structure used to advance the government's role in the higher education system are largely associated with financial models which provide incentives for universities to comply with the policy goals and directions (Becher & Kogan, 1980; Adams, 1998; Schmidtlein, 2004; Goedegebuure et al., 2007), and regulatory frameworks which constrain operations deemed to be of less value (Jackson, 1997a; Lucas & Boulton, 2008). Becher & Trowler (2001) argue that the financial and regulatory frameworks sought to rationalise and economise higher education systems in line with the NPM agenda which has dominated higher education since the 1980s, as noted in Chapter 2. Indeed, the detailed systems of structure arising from regulatory frameworks, financial models and explicit measures of performance are enacted through the so-called quality assurance and audit functions which are the focus of Chapter 5.

Universities

In their analysis of the role of a university Becher & Kogan questioned whether it actually had a substantive function, or whether it operated as "a holding company, a legal and organisational formula designed to authorise activities extrinsic to itself" (1980, p. 63). Other authors have suggested that universities—as discernable entities—play a definitive role in terms of managing the complex interdependencies that exist within the organisation, while preserving and enhancing an institutional identity within the broader socio-economic context that places constraints on how a university operates (Radloff & de la Harpe, 2007; Scott et al., 2008).

The complexities of operation within a university arise from the distributive nature of intellectual authority. Instead of being located at the centre of an organisational hierarchy, authority in universities is dispersed among specialised individuals who engage with knowledge creation, transmission and preservation in a relatively autonomous manner (Bowden & Marton, 1998; Schmidtlein, 2004). Consequently, it could be argued that the primary functions of a university are twofold:

1. to provide a physical 'home' that reflects the purposes and values of higher education in terms of its mission for knowledge creation, preservation and transmission (Becher & Kogan, 1980; Gallagher, 2010); and
2. to support the work of cognate individuals and discipline areas, coordinating their efforts for the benefit of the collective organisation and its mission (Dill, 2000; Schmidtlein, 2004).

One of the important ways a university advances these functions is through the development and promulgation of an 'institutional identity' reflective of the higher education mission alongside an individual university's physical location, history, cognate disciplines and the broader constituencies it exists to serve (Becher & Kogan, 1980; Rectors of European Universities, 1988). In other words, the institutional identity provides the vehicle for local interpretation of the broader purposes and functions of higher education, and the basis for a third function of a university:

3. to develop and advance an institutional identity which provides a local interpretation (e.g., based upon physical location, history, disciplinary breadth and broad constituencies) of the higher education mission.

A university is then an essential interface for reconciliation of demands made by its broader constituencies (including government) with those associated with supporting and coordinating the work of cognate individuals and disciplines. Systems of structure evolve at this interface, including policies and procedures intended to motivate and enable staff to advance the institutional identity (Ewell, 2002; Meyer & Evans, 2005; Lucas & Boulton, 2008), and information and communications systems that convey the institutional identity internally and externally (Taylor, 2005). These structures place constraints—not on the primary functions of a university (Functions 1 and 2 above) and the value placed on institutional autonomy and academic freedom, but on the activities conducted within the organisation for the advancement of its identity (Function 3). The systems of structure typically used in this regard include strategic planning and financial management procedures (Doring, 2002; Scott, 2004) which effect the distribution of funding, equipment and facilities within a university (Brunetto & Farr-Wharton, 2005; Taylor, 2005). As indicated in the previous section, the quality assurance and audit processes applied in universities are also a key aspect of the systems of structure examined in detail in Chapter 5. For now, the role of a university in determining the systems of structure that support its identify and mission is encapsulated in the following function:

4. establishing rules and procedures for control and coordination that foster achievement of Functions 1-3, safeguarding institutional autonomy and academic freedom through regular demonstrations of academic standards.

Academic units

The academic unit operates at the interface of institutional, disciplinary and individual academic staff members' identities (Kogan, 1999) to implement the teaching and research functions of the university (Taylor, 2005; Scott et al., 2008). In some respects the academic unit could be viewed as a recursive structure within the university with similar functions to the broader entity. However, the following discussion suggests that university-level functions are modified by academic units in order to adapt and accommodate additional constraints placed upon them.

Academic units develop and advance a collective identity within the broader socio-economic 'home' provided by the university, and in accordance with the disciplinary values, individual expertise and financial resources available (Becher & Trowler, 2001). Each of these factors places constraints on the role and function of the academic unit such that it cannot replicate the institutional identity exactly, but must interpret and modify it to fit its particular context and circumstances (Henkel, 2000; Prichard, 2000; Chandler et al., 2002; Brunetto & Farr-Wharton, 2005). Thus one of the functions of the academic unit can be summarised as follows:

- to develop and advance a collective identity within the constraints imposed by the institutional identity and resource allocation, and those arising from the disciplinary breadth and capabilities of cognate individuals.

Advancing the collective identity of the academic unit requires management of certain functions including financial and human resources (Scott et al., 2008). In addition the academic unit is responsible for local management and monitoring of what could be termed the 'knowledge resources' of a university including staff research, delivery of academic programmes and student support (Prichard, 2000). While the former function could be perceived as largely administrative, the latter function involves the support and development of individuals and disciplines within a frame of reference that extends beyond the academic unit to the university and the wider disciplinary networks of staff (Becher & Kogan, 1980). These ideas could be captured in the following statements of function:

- to provide an administrative 'home' for facilities, financial and human resource management;
- to support the work of academic staff and discipline areas by providing a platform for engagement within disciplinary frames of reference that benefits the academic unit and its teaching and research functions.

A study by Amabile, Hadley, & Kramer (2002) of creativity in knowledge workers proposed that managers should ensure the availability of time for deep immersion in problems perceived to be urgent and important, and foster focused interaction—not within groups—

but between individuals if they wished to promote creativity. They also suggested that extreme time pressures were to be avoided "particularly if you are looking for high levels of learning, exploration, idea generation and experimentation with new concepts" (2002, p. 60-61). These findings have implications for the role of the academic unit in that they extend its general support function to encompass custodianship and protection of what could broadly be termed 'academic endeavours'. Consequently, one of the functions of the academic unit is also:

- To act as custodian of academic endeavours by ensuring that academic staff have the time and space for creative interaction and immersion in activities associated with knowledge creation, preservation and transmission.

In terms of systems of structure, policies and procedures that support the achievement of academic unit functions, there appears to be very little attention paid in the literature to the mechanisms for control and coordination at academic unit level. In Houston's study of an academic unit within a university financial management procedures and annual performance review and planning interviews with individual staff appeared to be the only formalised mechanisms supporting the functions mentioned above (2007b).

Academic staff

Broadly speaking, the purposes of universities (knowledge creation, preservation and transmission) are progressed by individual academics (Karmel, 1990) who make and shape knowledge through their own research and teaching within a particular discipline (Kogan, 1999; Henkel, 2000). Although this suggestion could imply that a haphazard approach exists to education and research, academics are only semi-autonomous in that their work is informed and directed by multiple allegiances (Kogan, 1999; Macintyre, 2004; Dooley, 2007). The primary allegiance of academic staff is to a discipline which provides the ways and means of engagement with academic networks extending beyond university boundaries both nationally and internationally (Clark, 1989; Cheng, 2009; Henkel, 2000; Palmer-Noone, 2000; Silver, 2003; Macintyre, 2004; Akerlind, 2005; Lucas & Boulton, 2008), as well as issues or problems perceived to exist in society and the environment (Kogan, 1999). Academic staff also operate within the collective identities of the academic unit and the university to which they are affiliated (Henkel, 2000; Dooley, 2007). Each of these identities places constraints upon the extent of their engagement in the disciplinary networks. Furthermore, the strategic directions of the academic unit and university (e.g., to be recognised for excellent research, or the application of new knowledge in industry settings) can result in role conflict at an individual level as academics struggle to reconcile broad objectives with their own strengths and capabilities (Sassower, 2000). The systems of structure for an individual academic are therefore a result of the interplay between those that operate in their discipline, academic unit and university, in addition to their own strengths and capabilities. Their functions can be summarised as follows:

- to manage individual, disciplinary, academic unit and institutional identities in a manner that extends their own personal strengths and capabilities;
- to make and shape the creation, preservation and transmission of knowledge through research and teaching within a disciplinary framework.

Disciplines

The role and function of the discipline comprises three interdependent features. First, the term 'discipline' is intended to convey the controlled and self-limiting approach taken to the development and dissemination of knowledge (Parker, 2002, cited in Skelton, 2005; Brint, 2008). Second, the discipline provides a broad framework—comprising methods and methodologies—for the creation, preservation and transmission of knowledge in a particular subject area (Becher & Kogan, 1980; Lueddeke, 2003; Malcolm & Tarling, 2007). Finally, and perhaps most importantly, the discipline is an expression of academic identity in that it defines the network of peers who share similar aspirations and values (Henkel, 2000; Becher & Trowler, 2001).

Networks of peers operate at university, national and international levels (Becher & Kogan, 1980) providing external reference systems for the development, evaluation and communication of knowledge (Becher & Trowler, 2001; Gould, 2006). In other words, the discipline—both in construct and in conduct—provides the basis for connectivity between individual academics, academic networks, and the issues, problems and concerns of society past, present and future (Stella & Woodhouse, 2007).

Henkel (2000; 2005) argued that the discipline is an essential component of academic identity. Her findings reinforced those of Becher and Trowler (1989, cited as Becher & Trowler, 2001) whose exploration of "academic tribes and territories" showed that individual academic work related interdependently to the norms and values of the disciplinary peer group. Consequently, any changes to 'the inner and outer circle of professional acquaintance' that characterised the peer networks of individual academics (Becher & Trowler, 2001, p. 92) has an effect on the boundaries around and between the disciplines making them dynamic rather than stable entities (Bowden & Marton, 1998; Becher & Trowler, 2001). To summarise, the discipline is a system of structure that exists to:

- exemplify the controlled and self-limiting approach required for the development and dissemination of knowledge;
- provide a broad framework in which 'packages' of knowledge can be created, preserved and transferred on a global basis and across the passage of time;
- define networks of peers who share similar aspirations and values and forms external reference systems for the development, evaluation and communication of knowledge.

Summary

Table 13 provides a summary of the roles and functions of different elements in the higher education system including their related systems of structure. The Table is used as a point of departure for the following section which examines the particular context of New Zealand.

Table 13: Roles, Functions and Systems of Structure for Elements in the Higher Education System

System Level	Role and function	Systems of Structure
Central Level (Government)	Represents the views of various interest groups (e.g., industry representatives, employers, taxpayers and other potential users of higher education) and establishes education policies that will meet their needs within the national social and economic context. Safeguards the public interest by assuring that education is of an acceptable standard, and delivered efficiently and effectively within a coherent system. Reconciles the purposes and functions of individual universities with the policy directions articulated for the system at a national level. Establishes agencies that foster achievement of the aforementioned functions.	Policies Regulatory Frameworks Financial models and rules Purchaser/Provider agreements, explicit measures of performance and other NPM processes and techniques including quality assurance
University	Provides a physical 'home' that reflects the purposes and values of higher education in terms of its mission for knowledge creation, preservation and transmission. Supports the work of cognate individuals and discipline areas, coordinating their efforts for the benefit of the collective organisation and its mission. Develops and advances an institutional identity which provides a local interpretation (e.g., based upon physical location, history, disciplinary breadth and broad constituencies) of the higher education mission. Establishes rules and procedures for control and coordination that foster achievement of its functions, safeguarding institutional autonomy and academic freedom through regular demonstrations of academic standards.	Policies & procedures for financial management, strategic planning, and quality assurance Information and communications systems that reinforce the institutional identity

Academic Unit	Develops and advances a collective identity within the constraints imposed by the institutional identity and resource allocation, and those arising from the disciplinary breadth and capabilities of cognate individuals. Provides an administrative 'home' for facilities, financial and human resource management. Supports the work of academic staff and discipline areas by providing a platform for engagement within disciplinary frames that benefits the academic unit and its teaching and research functions. Acts as custodian of academic endeavours by ensuring that academic staff have the time and space for creative interaction and immersion in activities associated with knowledge creation, preservation and transmission.	Includes procedures for financial management and individual performance management Discipline-based
Academic Staff	Make and shape the creation, preservation and transmission of knowledge through research and teaching within a disciplinary framework. Manage individual, disciplinary, academic unit and institutional identities in a manner that extends their own personal strengths and capabilities.	Discipline-based Self-regulated Influenced by those at academic unit and university level
Discipline	Exemplifies the controlled and self-limiting approach required for the development and dissemination of knowledge. Provides broad frameworks in which 'packages' of knowledge can be created, preserved and transferred on a global basis and across the passage of time. Defines networks of peers who share similar aspirations and values and forms external reference systems for the development, evaluation and communication of knowledge.	Methods and methodologies for knowledge creation, preservation and transmission in a particular subject area

ROLES, FUNCTIONS & SYSTEMS OF STRUCTURE IN THE NEW ZEALAND CONTEXT

New Zealand Government

The Education Act (1989)—administered by the MoE—sets out general provisions relating to the roles and functions of the government agencies with responsibility for tertiary education (MoE, 2006b; 2008a). Implementation of the Government's role and function (Table 13) is discharged through three inter-related agencies: the education Minister[3] who has overall responsibility for the Government's administrative and policy functions, the MoE and the TEC.

[3] Reference can be made to http://www.parliament.nz/en-NZ for a detailed explanation of the New Zealand parliamentary system.

As described in Chapter 2, a cornerstone of the policy function is the TES and STEP which articulate respectively, the Government's long and medium term expectations of the tertiary sector (MoE, 2008a). Together the TES and STEP provide broad policy levers to foster greater cohesion within the tertiary education system and between TEOs and their communities including employers and industry (MoE, 2006c; Cabinet Policy Committee, 2006; TEC, 2007a). The TES and STEP set out the expected contributions for different types of TEO within the tertiary education system, delivering a framework for individual TEOs to communicate their contributions in agreed "Investment Plans". In effect, the TES and STEP provide mechanisms to improve the management of the tertiary education sector as a *system* and make it more amenable to central steering. This general approach was strongly endorsed during a recent OECD review of tertiary education in New Zealand (Goedegeburre et al., 2007) which observed the potential it provided for systematic coordination of the education sector in a manner that took account of diverse institutions.

The MoE is charged with advising government ministers on the overall strategy and priority areas to be addressed, and developing the policy framework in the context of the broader education sector which includes early childhood, primary and secondary education (MoE, 2006a; 2008a). The MoE also monitors and evaluates the TES, collaborating with other government agencies (e.g., the Department of Labour, Inland Revenue Department and the Ministry of Social Development) to collect data necessary for performance monitoring (State Services Commission, 2005; Goedegebuure, et al., 2007; MoE, 2006a; 2008a).

Amendments to the Education Act during the past decade have established the TEC (Education (Tertiary Reform) Amendment Act 2002, No. 50) and allocated to it functions regarding the planning, funding and monitoring system applied to TEOs from 2008. The role of the TEC is to give effect to the TES through the detailed development and implementation of appropriate systems of structure comprising funding and monitoring mechanisms (TEC, 2005). This involves working with TEOs on the design and development of their triennial investment plans and assessing those plans against gazetted criteria to determine the amount of funding that will be allocated (Education Act, 1989, Section 159F). Engagement with stakeholders is assured with the requirement that programmes and activities conducted by each TEO are informed by connections with communities and businesses (TEC, 2006). The TEC also monitors the performance of TEOs against their Plans and uses the information to provide advice to the Minister on the overall performance of the tertiary sector in relation to the TES (Education Act, 1989; MoE, 2006a; 2008a).

The State Services Commission (2005) observed that the reforms implemented in the Education (Tertiary Reform) Amendment Act (2002) resulted in some duplication of functions between the MoE and the TEC especially in relation to the dual delegation that exists for the provision of advice to the Minister. However, reflecting on the functions of the agencies in the light of information summarised in Table 13, there is evidence to suggest that the existing structures are likely to be effective. Furthermore it is possible that any overlap between the roles of the MoE and the TEC is not necessarily redundant, but could be

perceived as a strength of the system which enhances the capacity of the Minister to steer the sector—through the TES and STEP—in the light of consistent (or conflicting) information provided by each agency.

New Zealand universities

The following section draws upon literature and publications that explore the structure and function of New Zealand universities – the foundation document being the Education Act (1989). The Act specifies the governance structures of each New Zealand university, including a Council that is reasonably representative of the communities the university exists to serve (Section 165) and makes clear it is established for the purpose of ensuring the university maintains the highest ethical and academic standards (Section 181). The university's Council has particular responsibilities including the preparation of an Investment Plan which details the university's activities and strategic directions (Section 180), with specific attention paid to contributions made to the TES, engagement with stakeholders and measures of performance (Section 159). The Council is also required to establish an Academic Board which provides advice on academic matters including programmes of study (Section 182). Other systems of structure within which the New Zealand universities are required to operate include regulations and procedures developed and administered by CUAP and the audit requirements established by the NZUAAU. In other words, the quality assurance processes which are discussed in detail in Chapter 5.

An enduring feature of the New Zealand university system is the autonomy afforded to universities—via their Chief Executive—for the management of their administrative and academic affairs (Education Act, Section 196). A report of the Universities Review Committee (Watts et al., 1987) found New Zealand universities were responsive to the needs of students and operating at standards consistent with international benchmarks. Universities in New Zealand were also observed to be distinctive and differentiated in their character and approach as a direct consequence of their autonomy (Watts et al., 1987). A later review echoed this sentiment with the autonomy of New Zealand universities recognised as a significant strength of the New Zealand tertiary education system (Goedegebuure et al., 2007).

Institutional autonomy is further reinforced in the Education Act in relation to the functions of universities in New Zealand. Contradicting the observation made by Altbach (2000b) that "nowhere has academic freedom been fully delineated, and nowhere does it have the force of law" (p. 263), universities in New Zealand have a statutory obligation "to challenge orthodoxy, to investigate controversial topics and to express unpopular or dissident views" (Codd, 2002, p. 52). The relationship between academic freedom and institutional autonomy is specified in the Education Act (1989) and related to the functions of New Zealand universities in terms of:

"(a) the freedom of academic staff and students, within the law, to question and test received wisdom, to put forward new ideas and to state controversial or unpopular opinions;
(b) the freedom of academic staff and students to engage in research;
(c) the freedom of the institution and its staff to regulate the subject-matter of courses taught at the institution;
(d) the freedom of the institution and its staff to teach and assess students in the manner they consider best promotes learning;
(e) the freedom of the institution through its chief executive to appoint its own staff" (Section 161, Parts 1 and 2).

Any tendency for universities to become self-serving is mitigated by the requirements for accountability such that "institutions shall act in a manner that is consistent with:

(a) the need for the maintenance by institutions of the highest ethical standards and the need to permit public scrutiny to ensure the maintenance of those standards; and
(b) the need for accountability by institutions and the proper use by institutions of resources allocated to them" (Section 161, Part 3).

Particular structures established for the purposes of ensuring the accountability of universities are described more fully in Chapter 5 and include annual reports which are submitted to Parliament and audited to public accounting standards (MoE, 2006a; Earle, 2008). The reports are required to provide a statement of the universities' plans and objectives, and a detailed Statement of Service Performance which identifies the extent to which objectives have been achieved. These reports have been the subject of analysis by the MoE (Earle, 2008) which suggested that universities were primarily focused on maintaining existing standards of teaching, research and stakeholder engagement within a broader socio-economic context that presented challenges to the preservation of institutional income and autonomy (2008).

Referring back to the overall role of universities in Table 13 it appears that the roles and functions outlined in the Education Act (1989) provide adequate support for New Zealand universities to advance the purposes of higher education. In particular, the explicit interdependence of institutional autonomy, academic freedom and accountability stated in the Act (1989) is a distinctive feature of the New Zealand context which provides the foundation for universities as centres of advanced learning.

The role and function of academic units, academic staff and disciplines

The role and function of academic units, disciplines and academic staff in the New Zealand context appeared to be an area that has received little attention in the published literature. Sector-level policy and strategy documents were largely silent on these levels of the system with the exception of the Education Act (1989) which referred to the role of academic staff in the creation, preservation and transmission of knowledge within the provisions relating to academic freedom (Section 161). Information was therefore sourced from the academic

audit reports compiled by the NZUAAU, and publicly available Self-Review Portfolios compiled by individual universities in preparation for their academic audits, to gain insight into the functions of these system levels in New Zealand.

Academic Units

The role of academic units in New Zealand is consistent with that identified in the broader literature. In the academic audit material the academic unit was described as an operational unit that develops and implements plans (i.e., establishing a collective identity) which are aligned with the objectives of the university (i.e., the institutional identity), and that take account of the disciplines and capabilities of staff and students that comprise the department (Massey University, 2008; NZUAAU, 2005a; 2006b; 2007; 2009). The allocation of staff and financial resources were explicitly mentioned as an academic unit function (Massey University, 2008; NZUAAU, 2005a; 2005b; 2006a; University of Otago, 2006) corroborating the financial and human resource management roles and structures of the academic unit outlined in Table 13.

The advancement of research and teaching is the core function of academic units in New Zealand universities (NZUAAU, 2005b; 2006a; University of Otago, 2006) and the audit material placed particular emphasis on the responsibility of academic units for the design and development of courses including the assessment of, and support for, student learning (Massey University, 2008; NZUAAU 2005b; 2006a; 2006b; 2009; University of Otago, 2006). Provision of support for academic staff and discipline areas was reinforced in the pastoral care role of academic units, and functions aligned with the induction, professional development and ongoing appraisal of individual staff (Massey University, 2008; NZUAAU 2005b; 2006b; 2007; University of Otago, 2006).

Academic staff

The primary purpose of academic staff is to undertake teaching and research and the academic audit documents referred consistently to the function of individuals as 'developing themselves' to continuously improve their own performance in each activity as well as the performance of their students (Massey University, 2008; NZUAAU 2005a; 2005b; 2006a; 2006b; 2007; 2009; University of Otago, 2006). Enacting the 'research-teaching nexus' was specifically identified as a function of individual academic staff (Massey University, 2008; NZUAAU, 2006a; University of Otago, 2006). This aspect is discussed in more detail later in the Chapter.

Increasing the capacity for learning and expanding professional networks (e.g., amongst disciplines, local communities and industries) to enable knowledge transfer internal and external to the university was also part of an individual academic's role (Massey University, 2008; NZUAAU, 2005a; 2006a; 2006b; 2007; University of Otago, 2006). Importance was also placed upon the alignment of individual goals with those communicated through the

department and institutional identities (NZUAAU 2005a; 2006a; 2007; University of Otago, 2006).

DISCIPLINES

The role of the discipline received relatively little attention in the academic audit material and appeared to be primarily understood as an external reference system for the design, development, delivery and evaluation of programmes of study (NZUAAU, 2005a; 2005b; 2006a; 2009; University of Otago, 2006). However, there was a suggestion in some of the documents that disciplines influenced the processes and structures implemented at department level (NZUAAU, 2006b; University of Otago, 2006), as well as having an impact on university-level strategy (NZUAAU, 2009).

SUMMARY

Comparing the information regarding higher education roles and functions in the New Zealand context with the summary provided in Table 13 suggests that there is broad alignment between government and university roles as expressed in the Education Act (1989). Perspectives provided in the university academic audit material presented a partial representation of the roles of academic units and individuals in the New Zealand universities, and a limited understanding of the functions that disciplines fulfil. The case study findings in Part II of this Chapter provide an opportunity to explore the role and function of these elements of the system further.

SYSTEMS OF PROCESS & THEIR INTERACTION

There are a number of complex processes that operate within the higher education system, but the focus of this section is on those that directly advance the mission of knowledge creation, preservation and transmission namely: teaching, learning and research. The ways in which the processes interact with each other is also important and provides the basis for a discussion of the interdependence of teaching and research.

Teaching and learning

Teaching and learning are interrelated processes that form a highly complex system revolving around the teacher, the student and the subject material (Biggs, 1999; Pascarella, 2001). The interaction and engagement that occurs in a teaching and learning context—between students, between students and teachers, and between students, teachers and the curriculum—is generally agreed as being a pivotal element in the teaching and learning process (Astin, 1997; Bowden & Marton, 1998; Biggs, 1999; Horsburgh, 1999; Pascarella, 2001; Harvey & Newton, 2004; Australian Council for Education Research, 2008; Nusche, 2008). So too are the related processes of curriculum design and the assessment of student learning which provide frameworks for the communication of the expectations, knowledge and skills required of learners (Ramsden, 1986; Biggs, 1999; Krause, Green, Arkoudis, James, Jennings & McCulloch, 2008; Hernard, 2010), as well as the means to evaluate

changes in student learning and growth over time (Astin, 1997; Biggs, 1999; Chalmers, 2007).

The extent of interaction and engagement that occurs during the teaching and learning process is mediated by the abilities, values and motivations held by the participants. For example, Reid & Johnston (1999) used feedback from staff and students to derive 426 constructs related to 'good teaching' and the importance of each was weighted differently depending on the values and abilities of individual staff and students. Perhaps this is one of the reasons why Skelton (2005) reported a paucity of research related to pedagogy in higher education: the process is so complex and context dependent that little can be known outside detailed case studies where multiple factors can be investigated in context. Another contributing factor could be that teaching and learning is a 'private' process of engagement pursued by individuals and groups—both teachers and students—within disciplinary frameworks (Becher & Kogan, 1980; Holmes & McElwee, 1995; Brint, 2008; Coolbear, 2008).

Although teaching and learning may occur primarily within disciplines, the process is also influenced at other levels of the system, for example, in the recognition of teaching within the institutional identity and the support provided within the academic unit (Chalmers, 2008). However, the status and support provided for teaching and learning is often reported as deficient (Taylor et al., 1998; Coolbear, 2008; Macfarlane, 2009), especially by academic staff who perceive teaching to be undervalued (Ramsden & Martin, 1996; Adams, 1998; Menon, 2003; Curzon-Hobson, 2004; Coolbear, 2008). Indeed, "focusing on initiatives in teaching and learning, rather than giving priority to research, was widely, almost universally, perceived as a career hazard by staff interviewed in all types of university" (Hannan, English & Silver, 1999, p. 287). Adams (1998) argued that this was due to challenges arising from the development of consistent and reliable methods for recognising 'good teaching', although in the light of the complex array of factors that influence teaching and learning, consistency and reliability may be unattainable goals.

Bowden and Marton (1998) observed that "teaching is a process that requires professional decision-making at every stage, with teachers constantly being confronted by unique circumstances" (p. 134). In many ways the teaching and learning process can be viewed as a complex sub-system within higher education, operating at a local level, extending beyond the bounds of the institution through disciplinary networks, but remaining strongly influenced by individuals, academic units and universities. If indeed the teaching and learning process is systemic then overemphasis on any one factor such as assessment, curriculum design, interaction, or the values and attributes of the participants has the potential to undermine the overall process (Laughton, 2003; Lucas & Boulton, 2008). Skelton (2005) reported that attention to teaching practice should be balanced with attention to student learning outcomes not only for the students, but also for the teachers. However, even this statement with its focus on learning outcomes does not capture the richness and complexity that is characteristic of the teaching and learning process in higher education.

Research

Just as the teaching and learning process can be viewed as a complex sub-system within higher education, so too can the process of knowledge creation through research. Research is a systematic process of personal enquiry, reflection, and the creative integration of knowledge and evidential data collected within a disciplinary framework (Brew & Boud, 1995; Henkel, 2000). The research process is heavily dependent on the capabilities and awareness of individual researchers (Brew, 2001) who exhibit significant variation in the way they conceive and conduct research (Brew, 2001; Akerlind, 2008): "research is an intensely personal activity, strongly dependent on the ideas and imagination of individuals or groups of individuals" (Taylor, 2005, p. 1). Research and the ways in which the outcomes of research are disseminated are strongly influenced not only by the discipline which frames the questions explored and the approaches implemented, but by dynamic linkages that exist with the broader social and economic environment at local, national and global levels (Brew, 1999; 2001; Southwell, Gannaway, Orrell, Chalmers & Abraham, 2010).

Research can also be considered a creative process that requires a sustained focus within a supportive environment that enables independence (Amabile et al., 2002). Factors reported to influence the process of research and creativity have been identified, including the need for individuals to work relatively independently, without extensive direction or control and with access to adequate facilities and resources (Scott & Bruce, 1994; Taylor, 2005). This means that the collective identities and systems of structure established by the academic unit and the university are particularly important because they determine the emphasis placed on research as well as the extent to which research is encouraged, resourced and monitored (Altbach, 2003; Taylor, 2005).

In the light of the complex factors that interact to shape the research process it is not surprising that the outcomes and the time taken to achieve them are difficult to specify in advance (Watts et al., 1987; Taylor, 2005; Lucas & Boulton, 2008); moreover, they are likely to have a range of private and public beneficiaries (Watts et al., 1997; Malcolm & Tarling, 2007). Private beneficiaries include academic staff who can trade their research for reputational, resource and career benefits (Henkel, 2000), as they are far more likely to be promoted on the basis of their research record than their achievements in teaching and learning (Akerlind, 2005; Skelton, 2005; Krause et al., 2008; Smart, 2009). In addition, the outputs of research are often used to determine the allocation of resources and funding (Dill, 2000; Henkel, 2000; Krause et al., 2008) and, in some cases, faculty salaries (Astin, 1997). Basically, the conduct of research and the recognition of research outputs both within the university and in the higher education system are the primary currency of reputation at individual, academic unit and university levels (Kerr, 1975; Hernard, 2010).

In summary, and as for teaching and learning, the process of research is a complex sub-system in higher education influenced by factors operating at individual, disciplinary, academic unit and university levels. However, a distinctive feature of the research process

lies in the strength of the recognition and reward systems that reinforce the outcomes of research, not only within disciplinary networks, but also in relation to the identities of the academic unit and the university.

The interaction of teaching and research

The idea that research and teaching interact and are 'interdependent' has been attributed to Humboldt (Meister-Scheytt & Scheytt, 2005; Bradley et al., 2008). Now it is generally acknowledged as a defining feature of universities (Rectors of European Universities, 1988; Bradley et al., 2008; Romainville, 1996) by staff (Woodhouse, 1998; Robertson & Bond, 2001) and policy-makers alike (Krause et al., 2008). In New Zealand the links between research and teaching have been enshrined in legislation through the Education Act (1989) which states in relation to universities: "their research and teaching are closely interdependent and most of their teaching is done by people who are active in advancing knowledge" [Section 162(4)].

While the previous sections have described the processes of knowledge creation through research and transmission through teaching, exploring the interdependence of research and teaching requires viewing each process not as an end in itself, but as means of inquiry and learning (Brew & Boud, 1995; Woodhouse, 1998; Robertson & Bond, 2001; Paewai, 2001a). For example, if we consider the research process as one of personal inquiry, reflection and the creative integration of knowledge then staff who are active in research are arguably more able to model this as an approach to learning for their students (Marsh & Hattie, 2002; NZVCC, 2006), as well as demonstrating ownership of the material they teach, rather than merely transmitting knowledge generated by others (The Boyer Commission, 1998; Callahan, 2001). Other benefits derived from staff engagement with research are summarised by Paewai (2001b) and include the identification of new areas for teaching at an advanced level, the injection of relevant research into the learning resources used by students, and the use of research to facilitate scholarly debate.

Trowler & Wareham (2007) described the interaction of teaching and research as operating over at least seven dimensions, including learners and teachers researching together, research influencing curriculum design and learners conducting research projects. However, there is little empirical and quantitative evidence (based largely on measures of research publications and the outputs of student evaluations of teaching) to support an assertion that teaching and research are positively correlated (Brew & Boud, 1995; Romainvillle, 1996; Woodhouse, 1998; Brew, 1999; Robertson & Bond, 2001; Krause et al., 2008). Indeed, some studies (e.g., Astin, 1996, cited in Chalmers, 2007; Hattie & Marsh, 1996; Greenbank, 2006) have reported a zero or negative correlation between research performance and teaching quality. Nevertheless, it is difficult to contradict the statement by Brew (1999) that the link between the process of learning and the process of research occurs at an individual level in the mind of academics, although Robertson & Bond (2001) observed that academics have different

perceptions of the teaching-research nexus ranging from mutual incompatibility to mutual cohesion.

What is clear is that the interdependence of research and teaching is difficult to understand, let alone demonstrate, in terms of linear linkages and output measures. Understanding the research-teaching nexus involves understanding the processes and contexts that surround both activities. In other words, research and teaching are linked through a complex system of intermediary factors that are characteristic of the university environment (Paewai, 2001a). Many of these factors operate externally to the teaching and research processes, such as professional practice and experience (Gilmour, 2001; Pachana, 2001), procedures for the approval or accreditation of new teaching programmes, and other factors arising from disciplinary requirements, academic unit or university identities (Romainville, 1996; Trowler & Wareham, 2007; Zubrick, Reid & Rossiter, 2000).

Summary

Two main themes emerge from the examination of systems of process that operate in support of the higher education mission for knowledge creation, preservation and transmission. First, each of the processes—teaching, learning and research—can be conceived as complex sub-systems of the higher education system which are primarily based on the capacity and endeavours of individuals, and related to the disciplinary frameworks that operate in the context. Second, the processes operate interdependently with each other and are linked dynamically to systems of structure. These interactions between systems are a source of challenges and tensions in higher education which are discussed in the following section on Systems of Knowledge/Power.

SYSTEMS OF KNOWLEDGE/POWER

Examining the systems of knowledge/power prompts investigation of the interactions between systems and their elements in higher education to explore power relationships and what constitutes 'valid' knowledge in the context. The definition of 'power' used in the discussion follows that of Lukes (2005) whereby one group is subject to the power of another when they are affected in a way that may be contrary to their own interests and "rendered less free" (p. 114).

The discussion begins with an examination of collegial and managerial decision-making within universities which highlights the valid and valued knowledge arising from interactions between systems of structure and systems of meaning. The discussion then takes a broader view of the interactions between systems and their elements across different levels of the university system including information from the New Zealand context.

Collegial & managerial decision-making within universities

A distinctive feature of universities can be found in their processes for decision-making which operate according to managerial and intellectual hierarchies (Becher & Kogan, 1980;

Karmel, 1990; Sharrock, 1999; Kenny, 2008). The managerial hierarchy is communicated by the organisational structure which identifies staff in positions of formal authority such as the Vice-Chancellor and other managers (e.g., heads of academic units) with responsibility for particular areas (Sharrock, 1999; Considine, 2004). Sharrock (1999) argued that the management structure was essentially responsible for "managing the tangible asset base (physical, human, financial and technological)" (p. 94). In contrast the intellectual hierarchy comprised academic and general staff with recognised status relating to their involvement with teaching, learning and research—whether it be directly or in relation to the support and services underpinning the activities. The primary responsibility of the intellectual hierarchy is "developing the intangible asset base (curriculum, research effort, knowledge base, and intellectual capability" (Sharrock, 1999, p. 94).

While the managerial hierarchy operates according to an expectation that decisions made by managers will be implemented by their staff, the intellectual hierarchy is supported by more collegial approaches based on the consensus of "a structure or structures in which members have equal authority to participate in decisions which are binding on each of them" (Becher & Kogan, 1980, p. 67). Such approaches reflect particular values in universities such as tolerance of diversity, pluralism and democracy, providing the means for consultation, negotiation of shared ethical standards, and the mitigation of political differences within and across disciplinary boundaries (Scott, 2002). The benefits of these behaviours also include a deliberative and reflective approach to decision-making (Waters, 1989; Scott, 2002) which is widely considered an essential and distinctive feature of universities (McClenaghan, 1998; Malcolm & Tarling, 2007).

The tensions that exist between the collegial and managerial models operating in universities have been the subject of a number of investigations (Becher & Kogan, 1980; Sharrock, 1999; Chandler et al., 2002; Scott, 2002; Considine, 2004). Of particular interest has been an increasing reliance on more managerial forms of decision-making implemented by those with positional authority in the university hierarchy (Harloe & Perry, 2004; Kenny, 2009). The operating assumption echoes the NPM agenda whereby decisions are expedited within a management model and efficiency and effectiveness improved (Considine, 2004). This is perceived to be in conflict with the desire of those in the intellectual hierarchy—the academics—for more collegial forms of decision-making (Considine, 2004; Akerlind, 2005) which support a balance "between principle and pragmatism, and between a focus on local concerns and corporate concerns" (Sharrock, 1999, pp. 96-97).

One of the significant challenges facing universities relates to maintaining the active participation of academic staff in collegial governance, while balancing the increasing demands associated with the management of tangible asset bases (Harloe & Perry, 2004). Meyer (2007) argued that too much emphasis on the latter would undermine the ability of a university to attract and retain staff for whom collegiality and professional autonomy are motivating factors. In reality, both the managerial and intellectual forms of decision-making are equally important in universities. So too is the tension between them which supports

interaction between systems of structure and meaning, and fosters debate regarding construction and implementation of a university's identity and goals in relation to the higher education mission.

Knowledge/power across system levels

The systems of knowledge/power across different levels of the higher education system appear to be largely unexplored within the literature both in New Zealand and elsewhere. Although the relationship that exists between universities and the national agencies charged with steering the system has been investigated to some extent, relatively little attention has been paid to issues that may exist at other levels of the system. Consequently, while the following discussion has been informed by the literature available (e.g., Karmel, 1990; Marginson, 1997; Henkel, 2000; 2005) it is somewhat speculative and undoubtedly incomplete. However, it does serve to highlight some of the issues of knowledge/power likely to exist in the higher education system.

In relation to the systems of meaning explored at the beginning of the present Chapter, the tension between the social and economic functions of higher education was highlighted and then examined explicitly in the New Zealand context where greater value appeared to be placed on economic benefits. Emphasis on the earning power of graduates and the impact of universities on the economy reinforces a financial view of the return on investment in higher education, where valid and valued knowledge is largely that which can reported in economic form. It follows that 'knowledge holders' in the higher education system are those with the ability to communicate using economic terms—a skill unlikely to be distributed evenly across the diverse individuals and agencies likely to benefit from higher education.

Moderating the knowledge/power relationships that arise from higher education systems of meaning requires acceptance that economic outcomes are only one of the benefits of higher education. It also requires understanding that communication of economic outcomes without due consideration of the social context for individuals and groups operating within the system can have the effect of marginalising their values, and potentially overwriting their views with an omnipresent discourse focusing exclusively on the significance of the economy. It is in these respects that systems of structure can either amplify or mediate the knowledge/power relationships that arise from systems of meaning. Each level of the system—from the government to the individual—has a role to play in negotiating the complementary and conflicting interests and values that arise in the course of academic work. However, work by Henkel (2000; 2005) exploring perceptions of policy changes in higher education suggested that all levels of the higher education system were not equal. Decision-making in universities had become increasingly centralised despite claims by academics and managers that staff at the level of the academic unit held the key to innovation and influence in academic, professional and industrial networks (Henkel, 2000). The centralisation of decision-making reinforces the university as a distinct and powerful entity; moreover, external requirements imposed by government, especially those relating to

funding and reporting further reinforce the university as knowledge-holder (Marginson, 1997; Henkel, 2005). This proposition could explain findings that incumbents of the highest positions of managerial authority in the university were generally accepting of external interventions aimed at steering the higher education system because such interventions could be used to reinforce the dominance of the institutional identity (Marginson, 1997; Campbell & Slaughter, 1999; Henkel, 2000).

The picture that forms from consideration of the knowledge/power relations arising from systems of meaning and systems of structure across system levels is then one of universities and governments locked in a mutually reinforcing power struggle. While the university endeavours to protect its statutory autonomy, advance its own identity, and provide a physical home for the higher education mission (in line with the functions identified in Table 13), the government's actions aimed at aligning universities with social and economic policy set at a national level and framed primarily in economic terms inevitably come into conflict with the university's aspirations. This predicament is due in part to the assertion that "government priorities aim to solve known problems in a known world and are necessarily short term" while the purposes of universities are played out over a much longer period (Karmel, 1990, p. 333).

Tensions between the universities and government agencies are evident in the New Zealand context. For example, the role of the TEC in the funding and performance monitoring of TEOs places it in a position of considerable power—not only does it determine the amount of funding allocated to each TEO, but it can also seek to influence the institutional identity through its input to the design, development and negotiation of the TEO's multi-year Investment Plan. While the systems of structure may assist the government with steerage of the tertiary education sector, they also challenge the autonomy and identity of universities as they endeavour to negotiate the complementary and conflicting interests arising from their internal structures and international linkages nurtured within disciplines. A study by Mutch (2004) found that the balance of power in relation to educational policy making in New Zealand rested with the Government through the Minister of Education. A variety of other stakeholders and community interest groups were also cited as having an influence on education policy, but the voice of academics was noticeably absent (Mutch, 2004). If this is the case, then the statements of purpose for universities and provisions for institutional autonomy and academic freedom laid out in the New Zealand Education Act (1989) mask the extent to which decision-making in regard to investment in education, and the accountability of the TEO for their share of it, is conducted at government level. The consequences of this degree of centralisation were explored by Blandy (1988) in a study for the New Zealand Business Roundtable. Blandy observed that teaching and learning would be relegated secondary to the preservation and enhancement of the powerful when decision-making became too centralised. He also noted that the necessary independence of those directly involved in teaching, learning and research would be increasingly undermined as those in positions of power determined the criteria for success and failure (1988).

As the relationships between the university, the government and other communities shift so too does the strength and status of academic units, disciplines and academic staff depending on their potential contribution to social and economic outcomes valued externally. Changes to the interactions occurring at these levels were the subject of work by Henkel (2005) who found that the functions performed by the academic unit and the discipline were seriously challenged "and sometimes diminished" by the changes occurring at other levels of the education system (2005, p. 173). Henkel cited the national Research Assessment Exercise (RAE) implemented in the United Kingdom as an example of how policy directions advanced at a government level could have significant impact on the power relationships within universities. She noted that while the RAE reinforced the value of research and the importance of disciplines it did so selectively, based upon the extent to which the research could attract funding from agencies external to a university and the ease with which the research outputs could be assessed in a defined timeframe (2005).

The use of the research process to illustrate how systems of meaning and systems of structure impact systems of process is not random. After all the research process has tangible outcomes often financial in nature which align with the economic discourse that increasingly dominates higher education. It is therefore not surprising that academic units, universities and governments seek to influence the research process and appropriate its outcomes for their benefit. It might also go some way to explaining why the support and services for research and teaching have tended to evolve separately (Henkel, 2000). Teaching and learning—as a relatively private process bounded by disciplines and pursued by students in collaboration with their teachers—does not fit easily into an economic discourse and is harder to influence or manipulate using established systems of structure. Indeed, this disjunction could be one reason for the enduring perception that teaching and learning is valued less than research.

It is perhaps an awareness of the knowledge/power issues that exist across different levels of the higher education system that predisposes those who operate within universities to value the process of collegial decision-making. An appropriate balance between managerial and collegial decision-making may help to preserve the intellectual authority at the lower levels of the hierarchy and thereby mitigate the politicisation of activities that can arise in the negotiation of the institutional entity. Clark (1989) found that highly reputable universities tended to have stronger faculty hierarchies with greater influence on institutional decision-making when compared with more community-based colleges in which the decision-making was more centralised. Nevertheless, the importance of collegial decision-making in universities appears to be eroding and power is shifting "away from academically constructed and defined hierarchies to managerially defined ones… this is not a satisfactory long term situation" (Harloe & Perry, 2004, p. 7).

APPLICATION OF SYSTEMS TOOLS TO THE HIGHER EDUCATION LITERATURE

As outlined in Chapter 3, metaphor analysis and systems windows were two of the systems tools selected to provide alternative views of the literature on nature and purposes of universities. Application of the systems tools provides the means for creative thinking about the literature base as a whole, especially the extent to which particular areas or issues have been investigated.

Metaphor analysis

Following the procedures described in Chapter 3 each of the 253 publications and articles related to the nature and purposes of higher education were classified according to the metaphors perceived to underpin the text. The results are shown in Table 14:

Table 14: Metaphors Observed in Publications on the Nature and Purposes of Higher Education

Metaphor	Number and proportion of publications in which the metaphor was observed	
Political	190	75%
Culture	184	73%
Organism	112	44%
Machine	87	34%
Brain	58	23%
Coalition	49	19%
Flux and Transformation	27	11%
Domination	23	9%
Psychic Prison	15	6%

Discussion in the literature on the nature and purposes of higher education was dominated by the political and cultural metaphors. This suggests that there is significant interest in the ideological aspects of higher education and the ways in which they converge or conflict among participants at all levels of the system. It also confirms that knowledge and power are key factors operating within the higher education system.

It is interesting to note the attention paid to the organism and machine metaphors which are used to describe very different types of organisation. On the one hand, higher education

could be perceived as a bureaucratic system requiring indoctrination to a discipline that conveys the controlled and self-limiting approach to academic inquiry (a mechanistic tendency). On the other, it is a system that encourages individual creativity and adaptation which combine for the benefit of collective entities including disciplines, academic units and universities (an organismic feature). The presence of both metaphors in publications that relate to higher education suggests that both types of organisation have an important role to play.

Less than one quarter of the publications examined included some reference to the brain metaphor which implies that the ability of higher education to gather and process information about its functions is relatively underdeveloped in the literature. Use of the remaining metaphors was even less common although the appearance of coalition and domination metaphors—as subsets of the political metaphor—suggests an occasional tendency for sub-systems or groups in the higher education system to align in the advancement of particular ideologies or goals.

Given the observation made earlier in the present Chapter that universities are increasingly subject to economic and socio-political shifts in the local, national and global environment, it is perhaps surprising that the flux and transformation metaphor does not feature more prominently in the publications. This could reflect the relative stability of the higher education mission for knowledge creation, preservation and transmission which has endured for centuries. It may also be that the higher education context is not as dynamic as it is sometimes portrayed.

Systems windows

Table 15 presents the number and proportion of publications that described the systems of process, structure, meaning and knowledge/power in the higher education literature.

Table 15: Systems Windows Observed in Publications on the Nature and Purposes of Higher Education

Window	Number and proportion of publications in which the window was observed	
Process	175	69%
Meaning	146	58%
Structure	147	58%
Knowledge/Power	94	37%

The results show that the focus of publications relating to higher education is primarily on systems of process. In terms of the ideas explored in the present Chapter this finding

reinforces the importance of teaching, learning and research in universities. Attention is also paid to systems of meaning and structure which affirms that the higher education system functions according to the complex interplay of structures, processes and ideologies. As was observed in the earlier section on Systems of Knowledge/Power relatively little attention has been paid to the relationships between system elements and what may constitute valid knowledge in the context.

Part II: A localised perspective based on the case study findings

Images and perspectives provided by academic staff, middle managers, senior managers and government agency representatives in the case study form the basis for a localised perspective on the nature and purposes of universities in New Zealand. In accordance with the procedures described for the collation and analysis of interview data in Chapter 3, the responses of different groups to the interview questions provide insight into what is valued in the University selected for the research. Important findings emerging from the descriptive story are highlighted in bold text with illustrative quotes from individual participants italicised.

VIEWS OF ACADEMIC STAFF

All but one of the respondents drew attention to the individual freedom that characterised academia in a university. Equal recognition was given to "the collective" which spanned the local, institutional and international dimensions of the academic unit, the University and the discipline. Of particular interest was that both individual and collective dimensions were perceived as positive aspects of the University.

Academics identify the University as a place where they can function as individuals, and as part of a disciplinary community. Academics value freedom which is perceived to be essential if they are to fulfil a creative role:

> *A1 "[the University is] loosely structured in which individuals have a great deal of freedom because of their creative roles and you can't stifle that… they have freedom of movement and time"*
>
> *A2: "one of the things I believe is different about it [the University] is the relative freedom of the people that work there"*
>
> *A8: "It's a place which gives you a lot of freedom to choose precisely what you do which is one of the great benefits of universities… another great benefit is the number of really interesting people you get to have some influence over, or get to meet and talk with"*

Images of the University presented by just under half of the respondents included comparisons either with other universities "world-wide" or with "industry". The non-

hierarchical nature of the University was contrasted with the industrial or mechanistic model, or alternatively the similarity across and between 'all' universities was noted:

> *A3: "[the University is] a place of hidden values… would recognise the phenomena in any university you went to in the world… common themes include independence of thought… academic staff as free agents who would like to regard themselves as freely associating with the University… but it's more like a contract to agree to come together"*

The University was also perceived to have a strong political dimension in four responses. In one case the Acts of Parliament which define the University were mentioned and in another the potential of the collective to "feel like parliament" was stated:

> *A6: Some days it feels like a hospital, other days it feels like parliament… like a kafka-esk invention but other days it feels like a real community or a family… Universities are universal – that's their greatest strength and also their greatest weakness"*

Particular importance was placed on the way in which the University functions as a political and cultural entity. Such features were perceived to be common to all universities and distinct from corporate models operating in industrial contexts.

Over half of the participants noted that there was a "tension" and/or "conflict" between the individual and collective dimensions of the University which manifested as "pressure" and role conflict. The difficulty of managing people and functions within such an environment was noted:

> *A1: "you've got that tension… with creative individuals, of getting enough constraints to make sure that people are pulling in the same direction and working to the organisation's goals"*

A key characteristic of the University was that individual, collective, political, structural and cultural aspects interact and result in tension, conflict and pressure at a local level. The University was therefore:

> *A4: A single organisation broken up into lots of parts with conflicting interests and budgets and rules and regulations… [the] centre wanting to impose some sort of order / conformity and the periphery existing to be innovative and different so there's a lot of conflict… so we have this octopus of an organisation… hard to manage"*

All academic respondents mentioned teaching and research as the most important work done at the University. Most of the respondents indicated that teaching and research were equally important and a few noted the teaching-research nexus as a distinctive feature. Three of the

academics mentioned teaching and research separately and prioritised teaching over research:

> *A10: "Teaching is most important to me, but my colleagues may prefer research – both are important"*

> *A8: "Training new people to think, to present, to be subject specialists, to have a critical view… followed by the actual research work that goes on… We're here to create and disseminate knowledge, attitudes to knowledge, and models or argumentation"*

Academics value the *integration* of teaching, research and learning at the individual level and in terms of the wider community of which they are a part:

> *A6: "I'm happiest when I'm influencing and being influenced by the influences… the excitement for me is this junction between the University and the real world of practice… the application of knowledge is the important bit – not necessarily in terms of being immediately useful but in terms of being secure, being systemic, and coming out of left field"*

When asked about their role in relation to the broader work of the University, all but one of the academic respondents saw themselves as part of a wider collective furthering teaching and research. Images of the 'grass roots' 'foot soldier' were presented to describe the fundamental 'core business' role in which the respondents perceived themselves. The role of the academic as teacher/researcher was noted as having a particular continuity within a complex and dynamic system, and two of the participants explicitly commented about the nature of academics as 'committed and endeavouring':

> *A1: "I'm basically just the foot soldier… I contribute to an international community… [through research] and carry a normal load of teaching – those things are sometimes incompatible"*

> *A5: "I'm very much on the ground, at the grass roots… [but] I was always aware of the entire university beast and all the external influences on it… although we can see the University as a discrete and separate entity, its such a permeable membrane with what happens outside it in all arenas that you really have to be a renaissance man or woman to survive"*

Academic images of the University are constructed in accordance with their academic identities: as individual teacher/researchers; as members of a disciplinary group internal and external to the University; as academic staff in the particular University in which they work; and also as academics who form part of a global network of academic staff working in universities across the world:

A2: "I like to think that I'm part of a wonderful multi-faceted texture of academic endeavour… I like to think that I'm part of a wider thing, that I'm here to help and promote knowledge and equip students"

VIEWS OF MIDDLE MANAGERS

Similar to the views of academic staff, middle managers recognised the importance of 'the collective' as well as 'individual freedom'. They were also likely to contrast 'the collective' with industry and other universities worldwide. Just over half of the respondents drew attention to the collegiality that characterised the University, contrasting the image to that of a "business":

M2: [The University is a] "different institution than a business because we don't make a profit… academics view themselves as being much more independent than employees at a similar level in a business… while there's a management structure, the academics still expect that management will respect the collegiality and listen to what they have to say"

M4: [an academic's life] "is the closest thing to being self-employed but without the risks", [the University is comprised of] "a lot of very committed individuals who somehow work together"

Many of the images presented by middle managers more directly reflected those of their particular University in terms of time and space. For example, three middle managers noted the geographical location of the University, and two referred to the legacy and history of their University.

M5: "I'd probably describe it in terms of the physical location of the place"

M7: "[the University's] vision of itself is… a part of the city it is found in… It's a reasonably large urban university… its historically had a relatively small presence [in some discipline areas] compared to the other big universities… But it's a broadly based university and quite a proud one"

The images present in the responses of middle managers reflect those of academic staff in terms of the need for individual freedom and the contrasts between universities and business organisations. Middle Managers also provide a perspective based upon the location and history of the particular University in which they are working.

Over half of the middle managers rated teaching and research as equally important at the University. Three respondents noted the importance of teaching first, with two of these three

specifically identifying the Performance Based Research Fund (PBRF)[4] as competing with this priority.

> *M3: "teaching and research go hand in hand… the two are equally important… the University is about teaching and learning, doing research and the combination of the two"*
>
> *M6: "there's a tendency these days under the PBRF regime to be emphasising research too much perhaps. It seems to be getting too many of the accolades and too much of the priority… But we are at the mercy of government funding and given changes in the way governments fund universities it's not surprising… but it seems to me there's a danger of losing sight of the students who are here. This isn't just a research institution"*
>
> *M7: [our] "highest levels of achievement are as a teaching institution… I think that a large faction of staff see their primary identity as tertiary teachers"*

Middle managers value teaching and research equally and recognise that there is some tension and conflict between the two activities.

'Management' was a theme common to all middle manager responses regarding their role at the University: managing budgets, staff, departmental 'strategy' or 'vision', and communications upwards and downwards. Three of the respondents explicitly referred to their role as 'enabler and facilitator' at academic unit level and within the wider University.

> *M3: "traditionally the Head of School was an administrative job… something you did for three years and got rid of quickly to go back to your teaching and research… rather tedious paper pushing... devolution has meant it is more challenging in terms of managing finance, managing staff, managing strategy"*
>
> *M4: "I'm an intermediary, a facilitator… making sure communication goes both ways"*
>
> *M1: "Well you could say minimally that you manage your school and report the budget lines up… Alternatively the Head of School has a choice to be quite active in what else is available… and you can actually participate more in the other aspects of the University"*

Middle managers present images of the University that reflect a strong localised culture of individual performance within a wider political environment involving the University and funding structures. Middle managers value the opportunity they have to bring about change at a local level and within the context of the University of which they are a part.

[4] The Performance Based Research Fund (PBRF) is a model used to allocate research funding in the New Zealand tertiary education sector based upon assessments of individual academics' research outputs. The PBRF is discussed in more detail in Chapter 5.

VIEWS OF SENIOR MANAGERS

Senior Managers positioned the University within a broad environment comprising disciplinary networks and international dimensions, and as part of a local environment comprising national policy and funding requirements. The senior managers also presented images of the University that compared the way it functioned with the way other organisations were run:

> *S1: "there's more discussion about issues of fairness or sometimes appropriateness in the University environment than say in a corporate environment… things that move and change a society, not always, but often originate in a university… the University is very influential in pushing the boundaries of how society thinks about itself and its value sets / social values… intrinsic in a lot of these debates are things like rights, fairness, appropriateness, equity... It's a place of contrasts… in one sense… large and quite unwieldy and bureaucratic in terms of statutes and processes… it's sort of a free-wheeling ideas factory… hard to manage"*

> *S2: "it's predicated on a culture of individualism to a degree that is quite extraordinary and unlike most other organisations… there's disciplinary loyalty which… overshadows a sense of loyalty to the University… the University is a mechanism for them to carry on with their real work which is very much oriented to a world / international community… it requires a lot of flexibility on behalf of the management team… I think people like me need to recognise that there's an awful lot of very hard and good work going on in the different schools, in teaching and research and in the real attempt to bring those two together… it's individual, non-compliant, difficult to manage"*

Senior managers present an image of the University as an institution like no other: a complex and interconnected organisation of individuals whose allegiances extend beyond the University's boundaries.

Senior management responses to the question regarding the most important work at the University espoused a wider conception of learning through the processes of research and teaching:

> *S1: "Research and learning are intertwined in creating a teaching and learning environment… it's a milieu of things that are happening… the process is unclear but things go in and things come out and they impact society"*

> *S2: "The role of the University is to develop scholarship… in that way you don't have to differentiate learning and teaching and research because they're all about developing scholarship… I think if we see the universities as positively taking responsibility for scholarship… it's a community responsibility, a national and international responsibility… and it doesn't separate these elements that people tend to put in different boxes"*

For senior managers, the *process* of learning and scholarship forms the basis of work at the University and the foundation for connections between the University and its wider environment.

In terms of their role in the University, the focus of senior managers was very much on managing complexity in, and on behalf of, the particular University of which they were a part. All of the respondents discussed 'internal communications', specific institutional responsibilities as presented in their job description, and roles undertaken as advocate for the New Zealand university sector to some extent during their interviews.

> *S3: "I've got a particularly interesting job because it combines a number of features... I have strategic and operational oversight over [a variety of units]… I also, on behalf of the University am involved, through NZVCC on a government steering committee... so I have to be very careful with all the balls in the air"*

Senior managers provide the broadest perspective of the University's people, purposes, structures and functions. Their perspectives are informed by an understanding of the national and international environment, and localised in terms of the University of which they are a part.

VIEWS OF GOVERNMENT REPRESENTATIVES

All of the respondents described universities in terms of what they did, i.e., knowledge creation and transfer, advanced learning, service to industry and the economy. Only one of the respondents made reference to 'how' universities functioned in terms of a community of scholars within autonomous institutions. Two of the respondents made reference to the global community to which New Zealand universities belonged. Images of universities included:

> *C3: "a large institution focused on knowledge creation, knowledge transfer, skills development… a mixture of teachers, researchers, learners and administrators… a culture of their own unlike most organisational cultures, they have a strong sense of intellectual independence"*

> *C2: "I would say that a number of people I've spoken to in universities would see the global community as having greater priority than New Zealand legislation"*

Images of universities were also reflected in terms of what was perceived as the most important work. Respondents from the central authority identified teaching, research and the integration of the two activities towards learning for students, staff, the nation and the labour market as the core functions of universities:

> *C1: "From a public and tax payer perspective the most important part is putting through undergraduates… that's probably the most significant thing in terms of*

the population as a whole – providing skills for the labour market… research culture and training are important but effects are less tangible and less visible"

C2: "…within the Ministry of Education we've decided that effective teaching is really really important across all sectors"

C3: "…that innovation, that blue skies stuff that isn't going to have commercial return but will keep New Zealand internationally competitive is very important and we do need to keep that intellectual powerhouse going"

Respondents from the central authority place the greatest value on universities as vehicles for knowledge creation, dissemination and transfer.

Central authority respondents described their own roles within the sector in terms of intelligence gathering –synthesising evidence about TEOs and the outcomes of tertiary education in order to influence tertiary policy:

C1: "we're trying to piece together the picture that gives a sense of value for money for the country"

C2: "probably one of the challenges we have is the paucity of research [about tertiary education] at tertiary level"

C3: "a knowledge builder, synthesiser and influencer… drilling down, drilling up and using the information to inform ministers' decisions which in turn are these policy levers that government has around regulation, funding and information and legislation to influence how agencies and organisations and individuals within the system work… There's quite a lot of new integrations of data happening over the last 3 or 4 years and they're still going on over the next couple of years. In 3-5 years that is going to give us a much richer picture that will inform student choice, inform how policy is developed, will inform how institutions plan and strategise"

Images of universities from government representatives are dominated by the need for universities to maximise their potential for knowledge creation, transmission and transfer for the benefit of individuals and the nation. Exploring the impact of universities and their international standing on society and the economy is perceived to be a critical part of this process.

CASE STUDY FINDINGS: OBSERVATIONS

There are a number of observations that can be made about the case study findings and in relation to the discussions in Part I of the present Chapter. There is strong alignment between the images and purposes of the University presented by the case study respondents and those identified during the application of systems tools (metaphor analysis, systems windows) to the literature on higher education. For example reference to the political aspects of university life and the conflict that exists between functions, individuals and collectives was aligned with the dominance of the political and cultural metaphors in the

literature. The presence of both mechanistic and organismic methods of organisation was also reflected in the responses as shown in the following quotes from academic staff (relevant material in bold):

> *A4: A **single organisation broken up into lots of parts** with **conflicting interests** and **budgets and rules and regulations**… [the] centre wanting to impose some sort of **order / conformity** and the periphery existing to be innovative and different so there's a lot of **conflict**… so we have this **octopus of an organisation**… hard to manage"*

> *A5: "I'm very much on the ground, at the **grass roots**… [but] I was always aware of **the entire university beast** and all the external influences on it… although we can see the University as a discrete and separate entity, its such **a permeable membrane** with what happens outside it in all arenas that you really have to be a renaissance man or woman to survive"*

The focus of publications relating to the nature and purposes of higher education was primarily on systems of process which were also mentioned by the case study respondents. Of particular importance was specific discussion of teaching, research, their integration (or interdependence) and collegial decision-making which reinforced the attention paid to those processes and ideas earlier in this Chapter.

Overall, the consistency between the case study findings and those discussed in Part I of the present Chapter could support an assertion (also made by the University respondents in the case study) about the 'universality of university purposes, structures and processes'. Although such an assertion is likely to be an exaggeration, it does have implications for the generalisability of the findings presented in the Chapter: despite the findings being very much situated in the New Zealand context, they may have wider relevance to higher education systems in other countries.

Part III: Critique

Systematic boundary critique and self-reflection contribute to the process of integrating and analysing the findings from the case study and expanded dataset. In this final part of the Chapter, the sources of motivation, control, know-how/knowledge and legitimation that underpin the nature and purposes of universities are distilled through the application of boundary critique. Self-reflection is then used to highlight areas where my assumptions and perspectives may have influenced the information presented. The Chapter concludes with a summary of the key findings.

BOUNDARY CRITIQUE

The procedure for boundary critique was described in Chapter 3 as the collation of findings from participant interviews and the expanded dataset within the question framework proposed by Ulrich (1987; 2005). By exploring the sources of motivation, control, know-how/knowledge and legitimation that operate in the higher education context, and comparing

the actual and potential states of the system, understanding can be enhanced and the extent of involvement among those involved and affected can be investigated. An observation was also made in Chapter 3 that there appeared to be very little guidance in the literature regarding the procedure for boundary critique. In order to address this perceived gap, the boundary categories and definitions upon which the following analysis is derived is provided in Appendix 2.

Sources of motivation: the value basis

The boundary categories and definitions that form the value basis for higher education provide insight into the actual and intended clients, purposes and measures of success within the system. In relation to the clients of the higher education system, diverse beneficiaries were identified in the expanded dataset and case study including 'knowledge', disciplines, individual learners (students and academic staff), society, the national economy, the labour market, funding agencies and professional organisations. The purposes of universities were reported in very broad terms (e.g., 'advanced learning across multiple disciplines', 'knowledge creation, preservation and transmission', 'generation of knowledge and delivery of instruction that benefit national social development') reflecting the need to support a variety of activity for diverse beneficiaries who will have complementary and conflicting interests and values that change over time. Arguably, any greater specificity of purpose would compromise the interests and values of one beneficiary at the expense of another, and it is with that in mind that an area of boundary conflict can be observed in relation to the measures of success which were based on research outcomes and economic returns.

A summary of these findings is presented in Figure 5 which shows how the existing measures of success map to only two of the beneficiaries (the national economy and the labour market) and two of the functions of universities (knowledge creation and the generation of knowledge and instruction that benefits the national economy). This situation is what Midgley (2000) termed a 'narrow boundary judgement' which has the effect of marginalising the needs and values of the beneficiaries lying outside the boundary imposed by the measures of success. For those who adopt a narrow boundary judgement the contribution of universities to society, knowledge and individual learners is profane. In contrast, those who adopt a wider boundary judgement would view the contributions of universities to areas other than the labour market and economy as sacred. This situation can result in ritualised behaviour that involves superficial acknowledgement of marginal areas in a way that preserves the status quo rather than resolving areas of conflict (Chapter 3, p. 39). For example, the promulgation of strategies and policies which nominally acknowledge the contributions of universities to social development, but are actually about compliance with the interests of the powerful in relation to the economy and the labour market. This approach inevitably impacts on the sources of control, expertise and legitimation to which attention is now turned.

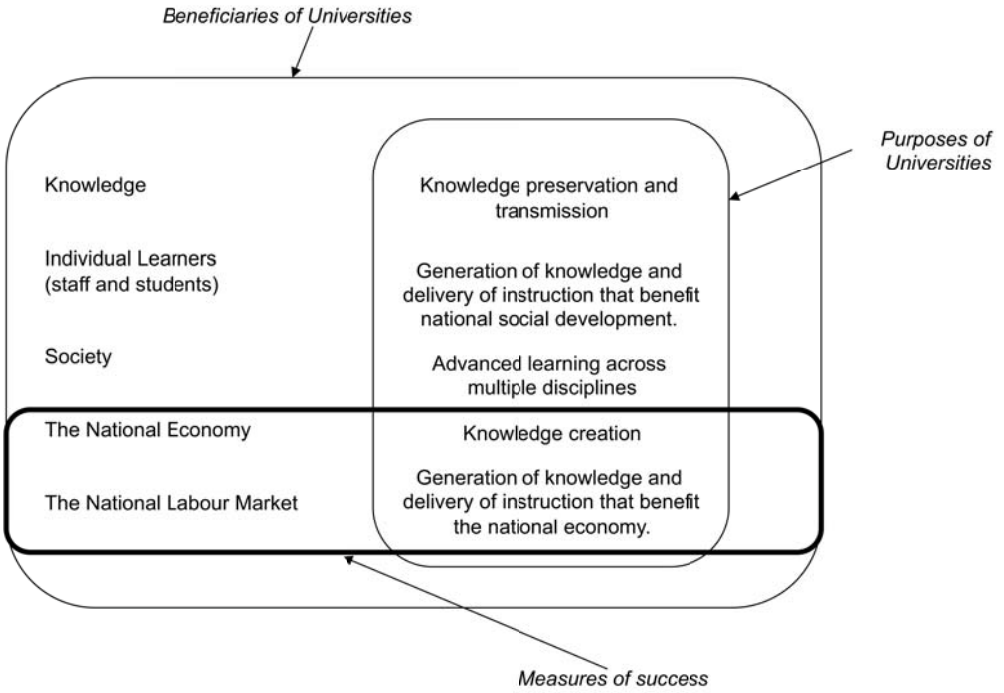

Figure 5: Boundary map of the categories and definitions forming the value basis of higher education

Sources of control: the basis of power

According to Ulrich (1987; 2005) the basis for power in a system lies with those who have the ability to change the measures of improvement and the means of control at their disposal. Analysis of the boundary categories and definitions in this area with reference to Appendix 2 indicates that government, universities and academic units can influence the measures of improvement within the system through policies, procedures, regulatory frameworks and funding requirements. However, only the government and universities are able to establish policies and procedures that support the distribution financial resources and are therefore able to constrain (or enable) the activities of academic units and individual academics and learners within the system. An alternative view of the basis of power can be found in a review of the means of control not at the disposal of the government, the university or the academic unit. These possibilities revolve around disciplinary affiliations and the codes of conduct required for engagement in teaching and research, collegial decision-making processes and academic freedom.

In Figure 6 which represents the power relations in diagrammatic form there are two areas worthy of note. First, the diagram shows the prominence of the controls (financial and regulatory) implemented at government and university levels whereas those exerted at academic unit level and by disciplines are relatively weak in comparison. This suggests that while responsibility for the actual creation, preservation and transmission of knowledge rests with the academy and the disciplines, existing power bases have the potential to marginalise their views and values to a significant extent. Second, the diagram can be used to illustrate some of the consequences arising from a higher education system that relies on more

centralised decision-making. As decisions are increasingly made on the basis of the tangible resource base (a shift towards the left of the diagram), the knowledge resources, standards and ethical conduct are more likely to be overlooked.

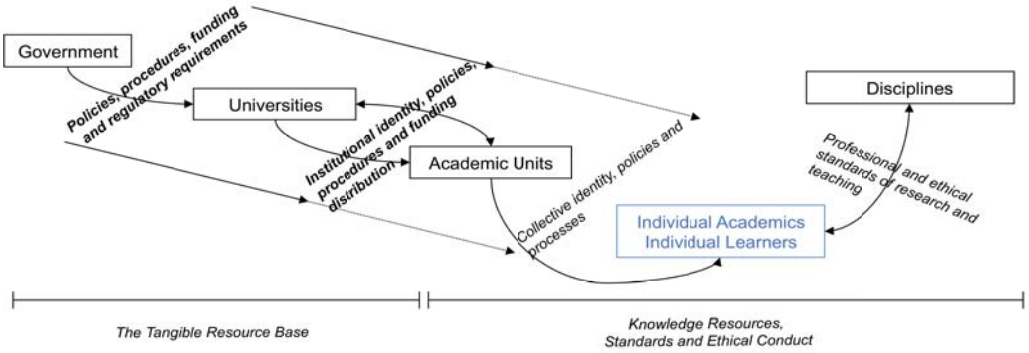

Figure 6: Map of the categories and definitions forming the power basis of higher education

These observations underscore the importance of maintaining a balance between collegial and managerial approaches to decision-making within universities. The collegial approach within a broad boundary encompassing the needs of staff, students and disciplines conflicts with the managerial approach which narrows the boundary to preserve power in line with the institutional identity and economic factors (Paewai, 2005). There is also the potential for those with positional authority in a university to expand their means of control using the regulatory and financial means at their disposal, potentially at the expense of those areas outside of their control including professional and ethical standards, collegial decision-making and institutional autonomy.

Sources of expertise: the basis of know-how/knowledge

The boundary categories and definitions that form the basis of know-how/knowledge in the higher education system are the result of interactions between those responsible for the overall system design, and the expertise that guarantees and improves that design. The basic design of universities is predicated on a historical foundation that defines them as places where knowledge is created, preserved and transmitted. The design of the higher education system has then been modified over time in accordance with knowledge and expertise contributed from three primary sources:

- governments—based upon national priorities particularly those related to the labour market and economy
- universities—as they develop and advance an institutional identity using collegial and managerial approaches to the management of diverse stakeholder needs
- disciplines—as frameworks for the development, evaluation and communication of knowledge within, and about, the higher education system.

Each source of expertise can draw from a range of individuals and agencies to validate the system design and judge its success. For example, through collegial decision-making universities can access the ideas of academic staff and students—informed by their disciplinary networks—to provide a rich source expertise for discussion of all matters relating to the design and improvement of the higher education system. Governments can establish agencies that monitor the outcomes of higher education in terms of effects on the labour market and the economy. The key question is whether or not the involvement of those likely to benefit from higher education is sufficient for the design of the system to evolve and fulfil its broad purposes. In order to explore this question further, it is necessary to examine the links between each of the potential beneficiaries and the primary sources of knowledge and expertise about the design of the system.

The potential beneficiaries (or 'customers') of higher education were summarised in Table 1 which now forms the foundation for Table 16 that describes the links between the beneficiaries and the basis for know-how/knowledge in the higher education system. This information is used in the following section for discussion of the Sources of Legitimation.

Table 16: Beneficiaries of Higher Education and their Links to the Basis for Know-How/Knowledge

<table>
<tr><td colspan="2">From Table 1: 'Customers of Higher Education'</td></tr>
<tr><td>Students current and potential
Parents of current and potential students
Graduates past and future
Employers of graduates
Current and potential academic staff
Current and potential general staff
Faculties and units internal to a university
Disciplines & disciplinary networks</td><td>Professional bodies
Industry
Funding agencies
Local community and region in which a university is placed
National system in which higher education plays a part
Government
Society in general</td></tr>
<tr><td colspan="2">Summary of the links between the beneficiaries and the basis for know-how/knowledge (government, universities and disciplines)

• Current academic and general staff, academic units, disciplines and government: these groups are linked explicitly to universities and are therefore able to influence the design, development and improvement of the higher education system.
• Funding agencies: by virtue of their possible affiliation with government and financial contribution to universities these agencies are associated can contribute to the development and improvement of the system as an expert and/or guarantor.
• Students in the system, potential academic staff: although it is possible that these groups could be among the individuals who create new knowledge about the system within disciplines, and contribute to decision-making within universities, the extent of their participation in the design and improvement of the higher education system is uncertain.</td></tr>
</table>

- **Graduates, employers of graduates, professional bodies, industry**: these groups are associated with the government guarantors of the system in terms of their participation in the labour market and the economy. However, the groups do not have a clear role in system design unless they are directly involved with government, universities or disciplines.
- **Local community and region(s) in which the university is placed, society in general, potential students, parents of current and potential students, future graduates, potential general staff**: with the exception of indirect linkages to universities, government or disciplines, it is difficult to establish how the views of these groups would be incorporated in the design, development and improvement of the higher education system.

Sources of legitimation: the basis of legitimation

Having examined the extent to which each of the beneficiaries of the higher education system appear to be linked to the basis for know-how/knowledge (Table 16) it is possible to extend the analysis and identify their involvement (or potential involvement) in its design and improvement. Sources of legitimation can then be discussed in relation to Ulrich's boundary questions: "who represents the concerns of the affected?; who contributes the self-reflection and responsibility among the involved?; and how do the involved deal with different world-views of the affected? (1987; 2005). Table 17 provides a starting point for discussion of these questions by integrating the basis for know-how/knowledge with the extent of engagement with the higher education beneficiaries.

Table 17: The Basis for Know-how/Knowledge and Engagement with those Involved and Affected by Higher Education

Basis for Know-How/ Knowledge	**Engagement with those involved and affected by Higher Education**		
	Those directly involved	**Those partially involved**	**Those affected but not involved**
Government	Other providers in the national system Universities	Industry Funding agencies Graduates Employers of graduates	Future graduates Parents of current and potential students
Universities	Government Current academic and general staff Academic units	Funding agencies Students	Potential students Potential general staff Local communities and region(s) in which a university is positioned
Disciplines	Academic units Current academic staff	Employers of graduates Industry Professional bodies Students Potential academic staff	Potential students Future graduates

It is difficult to draw any conclusions based solely on the information in Table 17. With regard to Ulrich's (1987; 2005) questions, there certainly appears to be opportunity for representation of the views of both the involved and the affected within the higher education system. There also appears to be opportunities for the enactment of self-reflection and responsibility within and across the basis for know-how/knowledge. It is only when the sources of motivation (the Value Basis) and sources of control (the Basis for Power) provide the context for interpretation of the information that the prominence of two particular world-views is observed and the critical boundary issues identified.

Boundary categories and definitions forming the Value Basis for higher education essentially revealed that two world-views operate within the context: one in which value is placed on the social functions of education arising from advanced learning across multiple disciplines in which knowledge is created, preserved and transmitted; and another in which value is placed on the economic benefits of higher education derived from knowledge creation and the delivery of instruction to support the labour market. Measures of success for the system strongly reinforce a narrow focus on economic benefits to an extent likely to undermine the social benefits.

Policies, procedures, regulations and funding requirements form the Basis of Power which operates at government and university levels. Consequential boundary issues were identified as the marginalisation of knowledge resources including the academic standards and ethical conduct determined and maintained in academic units and disciplines. Overlaying the value and power bases on Table 17 reveals the unresolved boundary issues in the higher education system (Figure 7) which are summarised following.

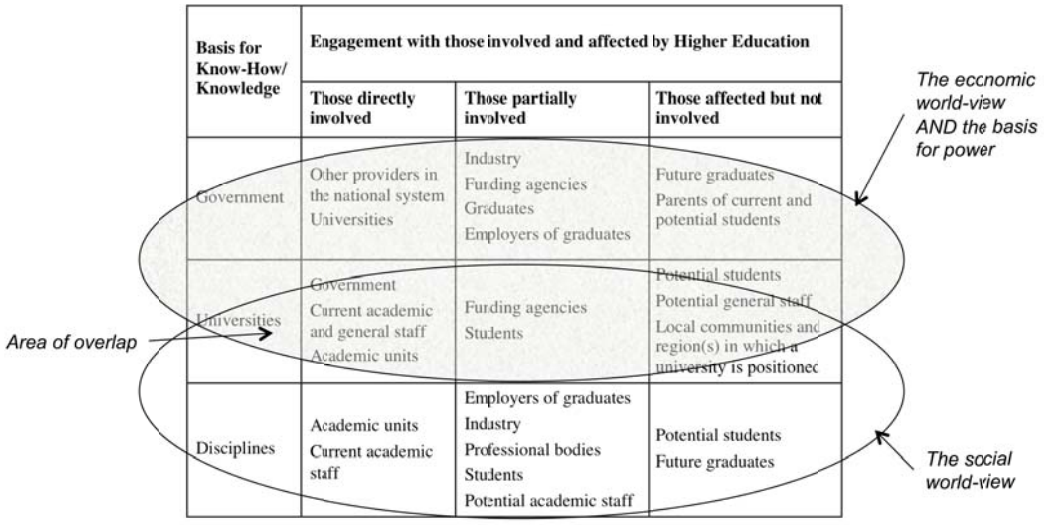

Figure 7: Unresolved boundary issues in higher education

- The economic world-view dominates the higher education system and as a consequence, the social world-view is marginalised along with disciplines and disciplinary networks, academic units and academic staff.
- The purposes of higher education from an economic world-view are essentially unitary and this conflicts with the diversity and pluralism that is captured within a social world-view.
- Universities exist at the interface of the social and economic views and are therefore a focal point for the conflict of values around social versus economic benefits. In the discussion of Systems of Knowledge/Power the observation was made that each level of the system had an important role to play in mediating the complementary and conflicting interests and values that arose in the course of academic work. However, existing at the interface of two different world-views means that universities occupy a privileged position in the determination of interests to be served, values to be endorsed, and the extent to which academics and academic units are enabled (or constrained) in the performance of their functions.

SELF-REFLECTION

Research involves making choices and self-reflection provides an opportunity to reflect on those choices and explore their implications not only for the current study but also for future research on related topics. Reflecting on the information and findings presented in this Chapter, I believe there were five main areas where the choices I made as researcher had a significant influence on the results presented. These areas are discussed below in relation to reflections on boundary setting and methods.

Reflections on boundary setting

1. Selection of Becher & Kogan's (1980) system levels as the basis for investigation of the higher education system and the inclusion of disciplines as a separate level within the framework.

Use of the system levels (individual, academic unit, university and government) was something of a pragmatic choice given that individuals could be relatively easily affiliated with one group or another. It is possible that selecting the case study participants in this way could have biased the findings by reinforcing the recursive boundaries that exist in the higher education system. However, this was mitigated to some extent with the use of boundary critique which prompted alternative views related to sources of motivation, knowledge and legitimation that operated within the system.

The explicit inclusion of the role that disciplines played within the system was a choice informed by the work of Henkel (2000) and Becher & Trowler (2001). This decision turned out to be of central importance given the pivotal role of disciplinary frameworks within universities. Unfortunately, these works were reviewed *after* the case study interviews had been conducted and, with the benefit of hindsight, it would have been very interesting to

explore the role of the discipline as perceived by the case study participants. Fortunately, the importance of the disciplines emerged in the participant responses without prompting and as such could be viewed as an emerging theme (or an oversight!) in the questions used to gather the interview data.

2. Restricting the selection of 'core processes' in higher education to teaching, learning and research.

There are an enormous number of processes that operate in very complex ways in the higher education system and in my professional capacity first as a quality and then as a policy manager I have had engagement with many of them. Thus, the decision to restrict the discussion of 'core processes' to those mentioned in the Chapter was a bold but not unconsidered one that emerged as my understanding of the Systems of Meaning developed. It appears obvious to me now that the core processes in a system whose purpose is knowledge creation, preservation and transmission would be those for knowledge creation, preservation and transmission. However, this was not the case from the outset perhaps because of my previous experience with other processes such as enrolment, graduation and applications for funding within a university etc. That is not to say that such processes are not important, only that they are not the *primary* processes that advance the higher education mission. It was with some relief that all of the processes selected for inclusion in the Chapter were corroborated in the case study findings although that may have been due to a sample bias which is discussed in Point 4 below.

3. Providing a (very) brief overview of the selected processes in higher education and limiting the discussion only to the core elements of each.

I was troubled during the write-up of the Systems of Process because of the brevity of discussion I gave to what are highly complex sub-systems within universities. One of the issues I encountered was in relation to the information available. While there appeared to be a great deal written about teaching and learning in higher education (some of which appears in Chapter 4), there seemed to be very little regarding the process of research. The conclusion I drew was that research was primarily conducted within disciplines and although my academic background gave me some understanding of research methods in physics, psychology and education I knew very little about the remaining disciplines. The choice I made was to develop my understanding of each process only to the point where I thought I could identify the core elements as opposed to being able to provide a more detailed process map. I believe this was sufficient for the purposes of determining how each process related to, and interacted with, the university and the system as a whole.

4. Choice of case study participants and specifically, the exclusion of students, professional and general staff who are involved and affected by higher education.

As observed in Point 1, the selection of case study participants was a pragmatic decision guided by Becher & Kogan's (1980) system levels. This boundary judgement excluded several groups (e.g., students, professional and general staff) whose perceptions and values were not explicitly explored or analysed in the context of this study. The question is: to what extent would the inclusion of their views have influenced or changed the discussion that has been presented? The answer is, by and large, unknown. It is useful to note that the groups have not been ignored as a number of publications and documents reviewed for the present research purported to represent their concerns. However, the final judgement regarding whether or not this is sufficient rests with the reader. For my part, I have recognised the oversight and accept any criticism that results.

Reflection on methods

5. Use of systems windows as an analytical framework for the Chapter and for the expanded dataset.

As stated in Chapter 3, the choice to use Systems Windows as a framework for structuring the present and the forthcoming Chapter occurred relatively late in the research. Reflecting upon the way in which this Chapter unfolded I believe it was a good decision in that it provided the means to consider and discuss different system views *and* the relationships between them. If the Systems Windows had not been used there was a possibility that the knowledge/power dimension may have been overlooked, as it appears to have been other studies. For that reason alone the use of Systems Windows has made a valuable contribution to the discussion and findings presented in this Chapter.

CHAPTER REVIEW: THE NATURE AND PURPOSES OF UNIVERSITIES

The enduring purpose(s) of universities can be summarised as learning through the creation, preservation and transmission of knowledge. The main processes that advance these purposes are complex and comprise teaching, learning, and research. Interaction and engagement with the processes occurs primarily at an individual level (or amongst groups of individuals) within disciplinary frameworks that form an external reference system for the development, evaluation and communication of knowledge. Control and coordination of the engagement is achieved at different levels of the system (i.e., academic unit, university and government) via policies, procedures, regulatory and funding frameworks. It is especially noteworthy that *quality assurance* has been observed as a system for control and coordination and this is examined further in the following Chapter. These systems of structure steer the activities occurring within disciplines and academic units in the directions established at other levels of the system. The authority to distribute funding forms the main basis for power, so the government and university, as the main givers and receivers of funding, are reinforced as powerful entities within the system.

The value placed on teaching, learning and research varies within the system amongst individuals and groups, and findings from the case study and the New Zealand literature

support this point. The social and economic outcomes of higher education tended to be valued equally by individual academics, managers of academic units and senior managers within the University. However, and despite the Education Act which refers to the importance of universities for social and economic development, Government strategies and measures of performance and success for universities in New Zealand are based almost entirely on economic outcomes. This has the effect of marginalising the social outcomes and potentially narrowing the intended purposes of universities to knowledge creation, preservation and transmission in service of the labour market and the economy.

Chapter 5: The Nature and Purposes of Quality Assurance in Universities

This Chapter advances the research objectives in terms of investigating perceptions of quality and quality assurance at different levels of the higher education system, and using systems thinking to examine assumptions regarding its nature and purposes. Multiple perspectives of quality assurance are reviewed within the same framework used in Chapter 4 comprising systems windows, findings from the literature and case study, and the application of systems tools.

The first part of the Chapter—a broad perspective on the nature and purposes of quality assurance—uses the literature to illustrate how the meanings of quality assurance, quality improvement and accountability are conflated. Definitions of quality assurance and improvement are proposed that show how a strong bias toward accountability is counterproductive to the improvement of teaching and learning. Roles and functions in relation to quality assurance at different levels of the system are examined, and information from the New Zealand context is used to identify areas of overlap and confusion. Processes and methods that support quality assurance and improvement are investigated with reference to audit and accreditation as well as teaching, learning and research.

The second part of the Chapter uses findings from the case study to provide a localised perspective on the findings canvassed in the literature. The responses of case study participants reveal a disconnection between existing approaches to quality assurance, and the improvement of teaching, learning and research. The systematic boundary critique applied in the final part of the Chapter demonstrates where and how quality assurance is being appropriated for accountability purposes. Self-reflection aids the process of integration, analysis and review of the findings.

Part I: A broad perspective including information regarding the New Zealand context

PURPOSES, VALUES & SYSTEMS OF MEANING

The purposes of quality assurance are typically reported as improvement and accountability (Bowden & Marton, 1998; Harvey, 2009; Kis, 2009). However, the meanings of quality assurance, improvement and accountability in the context of universities are contested and made on the basis of value judgements applied by different stakeholder groups (Readings, 1996; Kis, 2009). For example, a recent survey of quality assurance arrangements in the Asia-Pacific region found that the emphasis placed on improvement and accountability varied to large extent depending on the particular perspectives of quality assurance agencies in different areas (Asia-Pacific Quality Network, 2008). This variability suggests that the balance between the accountability and improvement functions of quality assurance is an ambiguous one; moreover, it perhaps explains the call for greater equivalence of the two functions proposed by some authors (Graham, Lyman & Trow, 1995; OECD, 2008a).

One of the problems encountered during examination of the literature on quality assurance, accountability and quality improvement was that the terms though often ill defined, are used interchangeably: "regrettably, there is little consistency, let alone consensus, over the meaning of even the most commonly used terms" (Gallagher, 2010, p. 126). Furthermore, the arguments for and about quality appeared to be openly tautological in some cases; for example, "the key characteristics of a high quality sector are… a sector where there is a culture of continuous enhancement of quality" (The Quality Assurance Agency for Higher Education, 2003, p. 1). For this reason it is necessary to elucidate each of the concepts—accountability, quality assurance and quality improvement—with reference to the others so that the systems of meaning can be examined.

The decision to use accountability as the starting point for the discussion was based on the apparent agreement amongst numerous authors that improving the public accountability of universities is the main driver behind implementation of quality assurance in the higher education system (Jackson, 1997a; Vidovich & Porter, 1999; Henkel, 2000; Biggs, 2001; Harvey & Newton, 2004; Scott, 2004; Harvey & Newton, 2005; Harvey, 2007; Lock & Lorenz, 2007; OECD, 2008a; Kuh & Ikenberry, 2009; Gallagher, 2010). However, while the general idea of 'accountability to stakeholders' is largely unchallenged by those in universities, specifically regarding who a university should be accountable to, what a university should be accountable for, and how accountability should be demonstrated are areas of contention (Graham et al., 1995; Readings, 1996; McPherson & Shulenburger, 2006).

In regard to 'who' universities should be accountable to the literature reviewed a number of stakeholder groups which are listed below. It is important to note that with the exception of three groups (current students, staff in the university and academic peers) all of the stakeholders could be viewed as outside universities suggesting a strong bias toward 'external' accountability.

- current and potential students (Stensaker, 2003; Harvey & Newton, 2004; McPherson & Shulenburger, 2006; Vidovich & Currie, 2006; Reilly & Jongsma, 2008; Australian Government, 2009);
- parents of current students (McPherson & Shulenburger, 2006);
- taxpayers (Australian Government, 2009);
- employers of graduates (Stensaker, 2003; Reilly & Jongsma, 2008);
- industry (Vidovich & Currie, 2006);
- government and other funding bodies—especially in relation to the outcomes achieved for the funding provided (Pollitt, 1990; Winch, 1996; Sullivan, 1997; McPherson & Shulenburger, 2006; Vidovich & Currie, 2006);
- staff in the university (McPherson & Shulenburger, 2006); and
- academic peers (Vidovich & Currie, 2006).

In relation to 'what' universities should be accountable for, programmes of study are specifically mentioned (Harvey & Newton, 2004; Reilly & Jongsma, 2008; Australian Government, 2009), often in the context of a more generalised call for accountability in relation to teaching, learning and research, and the need to demonstrate efficiency and effectiveness in the use of public resources received for those purposes (Becher & Kogan, 1980; Trow, 1996; Jackson, 1998; Scott, 2004; Kis, 2005). 'How' accountability should be demonstrated is primarily associated with the public availability of data and information related to programmes of study and their outcomes for students (Harvey & Newton, 2004; Reilly & Jongsma, 2008; Australian Government, 2009), institutional performance and value for money (Becher & Kogan, 1980; Harvey & Newton, 2004; Woodhouse, 2008; Australian Government, 2009), and policies and procedures for the design, development and implementation of teaching and research activities (Scott, 2004).

The 'who' and 'how' of accountability place clear emphasis on the consistent and transparent flow of information from universities outward to a variety of stakeholders (Henkel, 2000; McPherson & Shulenburger, 2006; OECD, 2008a). It also appears that programmes of study are ties that bind the 'who', 'what' and 'how' of accountability which could explain observations by some authors that quality assurance systems have focused primarily on the assessment of teaching and learning (Lazerson et al., 2000; The Quality Assurance Agency for Higher Education, 2003; Kis, 2005). Another factor contributing to the emphasis on teaching and learning has arisen from a perception that it is not subject to the same level of external scrutiny that is applied to research in terms of published results (Graham, Lyman & Trow, 1995; Kis, 2005). Consequently, quality assurance in universities has a strong focus on the provision of information outward to stakeholders, manifest in a combination of approaches:

- the development of broad plans, policies and new initiatives for teaching and learning at university level (Brunetto & Farr-Wharton, 2005; Radloff & de la Harpe, 2007; Stella & Woodhouse, 2007; Gray & Radloff, 2010);
- the installation of 'quality systems' comprising generic policies and measurement frameworks for planning and decision-making, audit, institutional research and development and approval of programmes of study (Jackson, 1997a; 1997b; 1998; Henkel, 2000).
- the formulation of 'general frameworks' for quality assurance aimed at identifying and focusing attention on important processes within universities such as staff selection and development, course evaluation and monitoring student progress (Freeman, 1993). A variation of this approach involves analysing in order to establish the processes claimed to 'matter most', such as reward systems for effective teaching, assessment of student learning, and the development of programmes that foster achievement of pre-determined graduate outcomes (Harvey & Newton, 2004; Srikanthan & Dalrymple, 2005; Kuh & Ikenberry, 2009);

- the establishment of standards and performance indicators purporting to assure the quality of teaching and learning by, for example, measuring employer satisfaction, student engagement with learning, student completion rates and graduate skills (e.g., Department of Education, Science & Training, 2004; PhillipsKPA Ltd., 2006; Chalmers, 2010); and
- external scrutiny, whether it be in the form of audit, accreditation or the examination of institutional data by an external agency (The Quality Assurance Agency for Higher Education, 2003).

Implementation of these approaches could be perceived as a genuine attempt to develop and implement quality assurance approaches that support the external accountability of universities. However, a limitation exists in that the time and expertise required for analysing and interpreting the information is not always at the disposal of the diverse groups for whom it is provided (Graham et al., 1995; McPherson & Shulenburger, 2006; Winch, 1996). Consequently, priority is given to quantifiable data, especially that which facilitates comparisons between universities and provide insights into programmes of study and their value for money (Nordvall & Braxton, 1996; Porter et al., 1997; Ewell, 1999; Kis, 2005). This approach also includes the use of relatively straightforward numerical performance indicators such as enrolments, course completions, and graduate employment rates which can be published and understood by a variety of individuals and groups outside universities (Ewell, 1999; Department of Education, Science & Training, 2004).

Another limitation of the general (and generalisable) nature of approaches taken to accountability-based quality assurance frameworks and indicators is that they fail to take into account that many initiatives directed toward improving teaching and learning are 'needs-driven' and based upon individual, academic unit, and university priorities at any one time (Hernard, 2010). Furthermore, there is a danger that the imposition of generic approaches to quality assurance can undermine the development of teaching and learning within a particular discipline (Brennan & Shah, 2000). Indeed, some authors have argued that external accountability requirements are actually detrimental to the development of mechanisms for internal accountability that are more likely to foster improvement of a university's teaching and learning functions (Graham et al., 1995; Jackson, 1997a; Henkel, 2000; Welsh & Metcalf, 2003; Vidovich & Currie, 2006). Trow (1996) described internal accountability as a process of ongoing inquiry (or research) conducted for the purposes of improving a university and its operations. It is also important to note that in contrast to the more summative and quantifiable forms of data collated for external accountability, data used for accountability within universities is formative and incorporates qualitative methods such as peer review to investigate local problems (Schmidtlein, 2004; Kis, 2005). However, such methods are perceived as unsuitable for external accountability purposes because they neither involve scrutiny by agencies outside universities, nor provide consistent and comparable data (Pollitt, 1990; Winch, 1996; Vidovich & Currie, 2006).

It is this basic incompatibility of methods and purposes that has prompted authors to argue that accountability within universities and to those outside are mutually exclusive (Vroeijenstijn, 1995; Thune, 1996, cited in Kis, 2005; Newton, 2000; 2001), and that processes for external accountability (such as audit or accreditation) have "been irrelevant to the improvement of higher education" (Trow, 1996, p. 316). There is some support for these observations provided by Chalmers (2007) who cited the example of student learning measures which had a positive impact on the improvement of students' learning and experience *internally*, but a negative impact when used to fulfil *external* accountability requirements. In another study Zepke & Leach (2007) concluded that external accountability measures of student retention were unlikely to have any impact on the quality of the student experience due to the multitude of intermediary factors that influenced whether or not a student elected to withdraw from a university.

An alternative view exists such that information collated for external accountability might not support internal improvement, but information gathered for internal improvement could facilitate external accountability (Graham et al., 1995; Sassower, 2000; Kis 2005; Chalmers, 2007). This implies, as observed by Bowden & Marton (1998), that focusing on external accountability is likely to be counter-productive: "the focus should be on quality improvement with accountability being a consequence, not the focus, of the educational quality assurance system because this is the way to produce better outcomes across the board" (p. 227).

It is at this point that the nature of the relationship between quality improvement, quality assurance, and the methods and purposes of internal and external accountability can be clarified, albeit in a circumlocutory manner for the purposes of argument. I begin with the premise that the main purpose of quality assurance is to improve the public accountability of universities. I then note the observation that this 'external accountability' is insufficient for, and may indeed be harmful to, the design and implementation of accountability systems within universities which are more likely to improve the quality of education. Thus it is possible that using quality assurance to improve external accountability is fundamentally flawed. If quality assurance is to contribute to improving the quality of education, the accountability systems within universities need to be (re)integrated in the 'quality assurance equation' such that:

> *Quality assurance = the methods and measures used for the purposes of internal and external accountability.*

However, the application of methods and measures do not, in and of themselves, assure quality (Harvey, 2009). Instead, determinations of quality must be situated within a particular context and informed by an open and honest process of discovery regarding reforms that could lead to improvements in teaching, learning and research (Graham et al., 1995; Harvey, 2007). Such a process could be construed as 'a systematic process of [personal] enquiry, reflection, and the creative integration of knowledge and evidential data

collected within a disciplinary framework' (Chapter 4, p. 65). In other words, *research*, but research conducted in the context of the institutional identity and systems of structure established by a university as opposed to a disciplinary framework.

Given this analysis, if we assume that there *is* a relationship between quality assurance and quality improvement in universities, and that relationship is not a direct one, then the process of researching it should be a transformative factor in the 'quality improvement equation'; that is:

> *Quality improvement = quality assurance + research that takes account contextual factors including the institutional identity.*

Adopting this approach would bring together the application of methods used to demonstrate internal and external accountability within a framework that potentially defines a meaningful relationship between quality assurance and quality improvement in universities.

Purposes of quality assurance in New Zealand

The review and renewal of national systems for quality assurance in New Zealand was briefly discussed in Chapter 2 and documents relating to the implementation of the reforms provide the basis for this section. In particular, papers describing the quality assurance and monitoring system (Cabinet Business Committee, 2006), and the contributions of the Quality Assurance Expert Advisory Group (2007) are used to investigate the purposes of quality assurance in the New Zealand tertiary education sector. The discussion suggests that the meanings of quality assurance are almost entirely conflated with the improvement of accountability.

The overall purposes of quality assurance in New Zealand are the same as those canvassed in the literature—accountability and quality enhancement (Cabinet Business Committee, 2006). Beginning with accountability, there is a clear expectation that TEOs are to be accountable to students, the Government and the general public. 'What' they should be accountable for includes programmes of study, teaching and learning and value for money. 'How' accountability should be demonstrated is through the provision of information and the disclosure of evidence relating to strengths, weaknesses and improved performance (Cabinet Business Committee, 2006; Cullen, 2006b; Quality Assurance Expert Advisory Group, 2007; Shiner, 2007; MoE, 2008a; 2009b).

In relation to quality enhancement, there is evidence to suggest that this purpose is very much secondary to accountability in New Zealand and linked primarily to performance against pre-defined criteria and standards. As observed in the OECD Review of New Zealand Tertiary Education (Goedegeburre et al., 2007) despite the value placed on accountability in New Zealand being similar to that observed elsewhere, it has been implemented via a system that requires extensive reporting by Tertiary Education

Organisations (TEOs) and has "an in-built tendency for detail and, as some would argue, an over-emphasis on compliance rather than on getting on with the job" (2007, p. 43). The main component of the reporting framework for universities is their annual reports which are submitted to Parliament and audited to public accounting standards (MoE, 2006a; Earle, 2008). The reports comprise both quantitative and qualitative information that is aligned with the universities' plans and objectives, and including Statements of Service Performance which identify the extent to which objectives have been achieved. However, despite containing detailed data, the reports do not necessarily provide information in a comparable format. This could be one of the reasons why the Cabinet Business Committee (2006) emphasised the importance of a quality assurance system that enhanced the availability of integrated datasets which could be used by a variety of government agencies to facilitate comparisons of performance between TEOs. Another reason relates to an assumption that public scrutiny of comparative information is more likely to motivate TEOs to improve their performance (Cabinet Business Committee, 2006; Shiner, 2007; TEC, 2010). In other words, TEOs are more likely to improve their *own* performance when their *relative* performance is exposed.

It has previously been noted that accountability in the broader context typically comprises a combination of four approaches: the development of university-level plans for teaching and learning, general frameworks for quality assurance that can analyse the processes that matter most, and performance indicators and external scrutiny. In New Zealand there is certainly evidence for implementation of the latter three (refer Chapter 2, p. 19), but attention to the first approach is not as apparent. For example, Coolbear observed that "the continuous improvement of teaching and learning is not driven strategically in most tertiary organisations" (2008, p. 2). If the focus on plans and strategies for teaching and learning at university level is as inconsistent as Coolbear (2008) suggests, then the four approaches to accountability are effectively reduced to general quality assurance frameworks, performance indicators and external review. In short quality assurance and external accountability become one and the same.

It is possible that mixed messages regarding the locus of responsibility for the design and implementation of accountability/quality assurance systems have influenced activities that may or may not occur at university level. In New Zealand, the assertion that "how well the quality assurance and performance monitoring system operates will not be driven by what government agencies do" (Cabinet Business Committee, 2006, Point 4) is somewhat contradicted by a later observation that new directions for quality assurance have been set by Government (MoE, 2008b). Similarly, the need for TEOs to focus on improving their own performance (NZQA, 2007; TEC, 2008) appears at odds with building national datasets to determine performance benchmarks and shared views about the processes and outcomes to be addressed (Cabinet Business Committee, 2006; Quality Assurance Expert Advisory Group, 2007). Furthermore, attempts to balance the internal and external responsibility for accountability/quality assurance by requiring TEOs to complete robust self-reviews for scrutiny by an external agency (Cabinet Policy Committee, 2006; TEC, 2007a) could be

negated by standardisation of the form, function, and documents produced from the self-review processes.

The overall picture of accountability/quality assurance in New Zealand is further complicated by the definitions of quality enhancement (or improvement) promulgated by government agencies. The Minister for Tertiary Education defined quality enhancement as the "review, planning and development processes that tertiary education organisations carry out to effect ongoing quality and capability development" (Cullen, 2006c, Point 12). The definition offered by the TEC was more succinctly stated as "quality enhancement consists of authentic self-reflection and strategies for improvement" (2008, p. 21). Both definitions imply that responsibility for quality improvement rests with TEOs which is difficult to reconcile with the idea that responsibility for quality assurance rests somewhere else.

QUALITY ASSURANCE/ACCOUNTABILITY IN ACTION: THE PERFORMANCE BASED RESEARCH FUND

The approach to quality assurance/accountability described previously is embodied in the PBRF with the added incentive of funding based on performance. The purposes of the PBRF are generally communicated in terms of encouraging excellence in research and improving its average quality (NZVCC, 2006; TEC, 2007b; 2010). However, the understandings of PBRF purposes are more diverse and include the improvement of accountability for research (Chambers et al., 2004), implementation of a consistent framework for quality assurance of research activities (MoE, 2006), and the implementation of a more transparent model for funding allocation (Adams, 2008, MoE, 2006; 2008a; TEC, 2007b).

Consistent with initiatives implemented to improve the accountability of TEOs, the application of the PBRF combines a general framework for the evaluation of research outputs with performance indicators and public scrutiny. The PBRF 'quality evaluation' comprises three elements: peer review of an individual academic's research outputs as presented in an evidence portfolio; research degree completions; and external research income—the latter two being quantitative measures (MoE, 2006; 2008a; TEC, 2007b). These components are combined by the TEC in a funding formula[5] which determines the financial resources allocated to each TEO as well as a published quality 'score' for universities and disciplines.

The parallels between the PBRF and improving accountability are evident in the espoused purpose to improve the quality of publicly available information regarding research outputs (Adams, 2008) thereby disclosing strengths and weaknesses within universities and disciplines. Uniform application of the PBRF procedures across all TEOs provides a comprehensive dataset which makes possible comparisons of performance, and the

[5] Peer review, research degree completions and external research income are combined according to percentage weightings of 60/25/15 (Tertiary Education Commission, 2007).

assumption that TEOs improve their own performance when their relative performance is exposed is explicit within the model: "the "ranking" of TEOs through their quality scores is a clear measure of the performance of each TEO relative to its peers" (TEC, 2007b, p. 14-15).

Consistent with the mixed messages provided in relation to the responsibility for quality assurance/accountability in the New Zealand tertiary education sector, the PBRF has been criticised for its strong focus on measurable outcomes as opposed to the improvement of processes within TEOs that are likely to influence those outcomes (Adams, 2008; Goedegeburre et al., 2007). There is also the possibility that implementation of the PBRF has diverted attention away from teaching and learning within TEOs, and there is some support for this proposition provided by Earle (2008) who found that the focus of universities on enhancing student achievement shifted to improving research during the same period as the PBRF was implemented.

SUMMARY – THE MEANINGS OF QUALITY ASSURANCE IN NEW ZEALAND

At the beginning of the present Chapter the tendency for quality assurance, accountability, quality improvement and quality enhancement to be used interchangeably was highlighted. Based upon the previous discussion it appears that this is also the case in New Zealand, but with the added complication of confusion regarding responsibilities. Simply put, the responsibility for the assurance of quality (which is conflated with adherence to requirements for accountability) rests with Government and its agencies, while responsibility for quality enhancement (or improvement) lies with individual TEOs. As observed earlier in the Chapter, this division of labour is likely to be detrimental to the development of mechanisms for quality assurance within universities that can lead to improvement of teaching, learning and research.

The proposition that quality assurance should be made up of the methods and measures used for the purposes of internal and external accountability would be one way to address the imbalance that exists between government and TEO-driven approaches to quality and accountability in the New Zealand tertiary education sector. It would also address two gaps in the tertiary system which have been observed at the TEO level: the interpretation of measures for teaching and learning (Coolbear, 2008), and the processes and support provided for research (Adams, 2008). Roles and functions in relation to quality assurance, accountability and improvement are explored further in the next section regarding Systems of Structure.

ROLES, FUNCTIONS & SYSTEMS OF STRUCTURE

Examination of the role and functions of particular elements in the higher education system in relation to quality assurance and improvement is based upon the system levels described in Chapter 4:

- the central level (government) which administers the overall planning and monitoring of the higher education system including the allocation of resources;
- universities which advance the higher education mission;
- academic units which coordinate and support the work of individuals within disciplines;
- academic staff who make and shape the creation, preservation and transmission of knowledge; and
- disciplines that provide the external reference systems for the development, evaluation and communication of knowledge.

Systems of structure—defined as rules and procedures for control and coordination—are present within each of these levels and it is the purpose of this section to examine each level and identify the structures associated with it. The synonymous nature of quality assurance, accountability and quality improvement within the reference material presented some challenges in terms of reconciling the role of each level (in terms of what was said) with its actual function (relating to what it did). It is therefore useful to note the distinction made henceforth between accountability [as the methods and measures reported within universities (internal accountability) or to a wider audience (external accountability)], quality assurance (being the combination of methods and measures for internal and external accountability), and quality improvement which refers to quality assurance informed by a process of critical inquiry. In cases where the functions of a system level have questionable alignment with these definitions this has been indicated with the use of half quotes.

The central level: government

The functions of government are typically described in terms of the development and application of reporting mechanisms (often in the form of numerical indicators) across the higher education system to assess its performance and that of the universities within it (Ewell, 2002; MoE, 2006a; Chalmers et al., 2008). In some cases the reports, and the data they contain, are used for the purposes of performance-based funding which provides an incentive for adherence to national policy directions, or compliance with threshold standards set by government or its agencies (Jackson, 1997a; Harvey, 2007; Chalmers et al., 2008; Australian Government, 2009).

Government is also responsible for the establishment of agencies which are then charged with the administration of 'quality assurance' in the higher education system (Harman, 1998; Kis, 2005). Two types of organisations have evolved to fulfil this purpose: accreditation agencies which are most often associated with the external accountability function; and audit agencies which attempt to advance a dual mandate of quality assurance and quality improvement (Harvey, 2004b; Proitz et al., 2004). Prior to arriving at a concise description of the role of government in relation to quality assurance, it is important to examine the functions and structures associated with these agencies. It is also worthy of note that although the agencies are discussed separately in the following paragraphs, they can co-exist

within a single organisation. An example of this arrangement can be found in Australia where the Australian Government has recently established a Tertiary Education Quality and Standards Agency that will perform both accreditation and audit functions, including applying sanctions when universities fail to comply with the minimum standards set for their operations (Australian Government, 2009).

ACCREDITATION AGENCIES

Accreditation agencies were originally founded in the United States of America (Welsh & Metcalf, 2003; AUQA, 2008) where they remain the most prevalent form of 'quality assurance' in operation today (Chalmers, 2007; Kuh & Ikenberry, 2009). The accreditation agency model has been replicated in many countries across the world where it is used to establish the legitimacy of universities and provide a stamp of approval that they meet the minimum standards set for operation as a provider of higher education within a particular country (Haakstad, 2001; Vaughn, 2002; Harvey, 2004b; Proitz et al., 2004; Stensaker & Harvey, 2006). Accreditation is often a mandatory requirement for a university to be able to award nationally-recognised qualifications and gain access to government funding (Haakstad, 2001; Chalmers, 2007).

Accreditation agencies have also developed independent of government for the purposes of programme accreditation by professional bodies or associations of universities (Haakstad, 2001; Harvey, 2004b). Independent accreditation agencies offer an additional guarantee whereby particular programmes have been deemed to meet minimum standards for the adequate preparation of entry-level professionals in a specific field (Jackson, 1997b; Haakstad, 2001; Harvey, 2004b; Stensaker & Harvey, 2006; European Association for Quality Assurance in Higher Education, 2007). The agencies also provide a platform for professional associations (e.g., for teachers, accountants, engineers, medical practitioners etc.) to set standards and exert a measure of control over the education and training of students by accredited universities (Harvey, 2004b; Mathews, 2004; Stensaker & Harvey 2006; Padro & Martin, 2008).

The establishment of standards or criteria against which a programme or a university is compared in order make judgements regarding the award of an 'accredited status' are the foundation for the systems of structure governing accreditation. Strict adherence to the agency's processes for accreditation (e.g., the formatting and submission of applications) is required and this is discussed further in relation to Systems of Process later in the Chapter.

AUDIT AGENCIES

Audit agencies have a public assurance role in that they provide an independent assessment of a university's capability for assuring the quality of its programmes of study and the services that support them (Graham, et al. 1995; Meade & Woodhouse, 2000; Jackson, Singh, Hendry, Smith & Sutton, 2006; AUQA, 2008; 2009). One of the reported benefits of audits has been to make quality assurance a university-level concern, providing a formal and

public record of the systems and processes that operate within them (The Quality Assurance Agency for Higher Education, 2003; Carmichael, MacCionna & Wolff, 2007). This has an additional benefit of raising public awareness about the range of practices that operate across the higher education system (Jackson, 1997a). However, as Woodhouse (2008) observes, this benefit could be offset if audit structures do not pay sufficient attention to advancing 'quality literacy' amongst the general public by providing guidance about how accountability and audit-related information should be analysed and interpreted.

Audit agencies also have a role in assisting a university to improve its operations through the processes of self-review and exposure to independent assessment (Meade & Woodhouse, 2000). Furthermore, the agencies have been perceived by some authors as having a motivating effect on a university's willingness to engage in self-review and identify improvements to be implemented before, during, and after the audit has been conducted (Kis, 2005; Jackson et al., 2006).

Systems of structure in relation to academic audits often draw upon the university's own plans and objectives as the 'standards' against which the investigation is carried out. Ensuring that the audit process is implemented consistently across different universities further requires the compilation of detailed 'audit manuals' which serve a similar purpose to the criteria and standards disseminated by accreditation agencies in that they provide details of the process, specific areas to be addressed, and expectations regarding the kinds of evidence that an audit panel expects to view (see for example, the AUQA Audit Manual, 2010).

SUMMARY – THE ROLE AND FUNCTION OF GOVERNMENT IN RELATION TO QUALITY ASSURANCE

The interplay of performance reporting, accreditation agencies that bestow legitimacy and assess adherence to minimum standards, and audit agencies that have a public assurance function are strongly aligned with the external accountability component of quality assurance. Although audit agencies have attempted to fulfil external accountability requirements alongside an agenda for improvement of universities, a lack of detailed and ongoing attention to methods and measures used within universities for internal accountability renders it insufficient for quality assurance purposes. Consequently, the role of government in relation to quality assurance can be summarised as establishing systems of structure within a broad framework—comprising measures and methods of performance assessment—against which universities are required to demonstrate their external accountability.

Universities

Quality assurance and quality improvement are often positioned as a university-level responsibility aligned with the setting and maintenance of 'standards' (Jackson, 1997a; Henkel, 2000; The Quality Assurance Agency for Higher Education, 2003; Kis, 2005). The

implementation of quality assurance in universities was described earlier in terms of broad plans and policies, development of frameworks for quality assurance, the application of performance indicators and measures of satisfaction, and the allowance of external scrutiny including accreditation and academic audit. Ball (2010) suggested that the symbolism of these initiatives was just as important as their substance as they could "work as a means of manufacturing consensus", thereby providing "a touchstone of shared endeavour which displaces or subsumes differences, disagreements and value divergences" (p. 226). Collectively, the plans, frameworks and measures provide the systems of structure for quality assurance at university level. However, an unfortunate consequence has been a perception that quality assurance is an administrative function driven from the 'top-down' and reflective only of values that apply generically across a university (Brennan & Shah, 2000; Macintyre, 2004).

One of the responsibilities of universities identified in Chapter 4 was the establishment of an institutional identity that provided a local interpretation of the higher education mission based upon the physical location, history, disciplinary breadth and broad constituencies of a university. Some authors agree that the selection of methods and measures required to evaluate the achievement of the institutional identity is one of the core functions of universities, as is the productive use of results to inform decision-making in regard to areas for improvement (Graham et al., 1995; Ewell, 2002; Kis, 2005; Kuh & Ikenberry, 2009). Scott (2004) provided examples of successful universities which had followed this approach by paying attention not only to methods and measures for monitoring core activities (i.e., teaching, learning and research) and organisational management (e.g., communication and resourcing), but by critically evaluating whether or not combining methods and measures provides information that informs the improvement of activities and services.

Thus, I propose that the role of universities in relation to quality assurance can be summarised as:

- selecting, applying and continuously evaluating methods and measures to determine whether or not a university is behaving in accordance its institutional identity; and
- using methods and measures judiciously and for the purposes of improving activities and services.

The complicating factor identified previously in this Chapter appears to be that methods and measures required for external accountability purposes are likely to be insufficient for evaluation and improvement in relation to the institutional identity. Therefore, universities also have a role to act as "an interest negotiator, policy translator and creator of meaning" in regard to quality assurance (Stensaker, 2003, p. 158). In other words:

- to achieve a balance between the methods and measures used for external accountability purposes, with those important for internal evaluations consonant with the institutional identity.

The role of a university's Academic Board requires specific mention as an important academic entity in a university's quality assurance system. In his "Thematic Analysis: The Role of the Academic Boards in University Governance" Dooley (2007) examined academic audit reports from universities in the Australian higher education system. His findings suggested that Academic Boards operated according to the principles of collegial decision-making ostensibly for the purposes of maintaining standards for teaching, learning and research. He concluded that although quality assurance was perceived as a function of Academic Boards, there was evidence to suggest that they lacked the power to forge let alone implement quality assurance systems within universities (2007). Perhaps this is not surprising given the linkages between power and funding in universities. However, given a university's function to balance the methods and measures for internal and external accountability as part of the design and implementation of the quality assurance system, it may be that one of the main roles of the Academic Board is to monitor the extent to which this occurs.

Academic units

The literature reviewed for the present research was found to be largely silent regarding the role of the academic unit in relation to quality assurance, possibly because it has been so commonly positioned as a responsibility discharged at university and government levels. However, in his description of academic regulation in the United Kingdom higher education system, Jackson (1997a; 1997b; 1998) suggested that a regulatory framework could be applied either at university or academic unit level as the principle of balancing accountability and improvement were the same (1997a). As his argument evolved, he further observed that more sophisticated approaches to regulation involved broad requirements at university level which were then contextualised and owned at academic unit level (1998). This is consistent with the observations of Hernard (2010) that "the success of any quality initiative supported by the institution depends mainly on the commitment of the Heads of Department" (p. 7), and that initiatives are adapted and customised in academic units in line with the practicalities and values associated with the cognate disciplinary cultures (2010). This effectively places the academic unit at a pivotal point in the higher education system as it strives to reconcile methods and measures for accountability from inside and outside the university, with the creation of mechanisms appropriate to the local context. Consequently, it may be that the role of "interest negotiator, policy translator and creator of meaning" (Stensaker, 2003, p. 158) is most critical at the academic unit level.

I propose that the academic unit should be viewed as a recursive entity within the wider university, and therefore the quality assurance role, function and associated systems of

structure would be similar to those identified at university level with some adaptation for the academic unit context. This would mean that the academic unit:

- selects, applies and continuously evaluates methods and measures for determining whether or not it is behaving in accordance with its own identity and that of the university;
- uses methods and measures judiciously and for the purposes of improving activities and services; and
- negotiates a balance between the methods and measures used for accountability purposes at other levels of the system, with those important for evaluations consonant with the academic unit identity.

Academic staff

Many authors agree that it is academic staff who shoulder the responsibility for quality improvement both in relation to their own work and that of the academic unit and university (Karmel, 1990; Graham et al., 1995; Jackson, 1997a; Watty, 2003). Indeed, in studies of academic staff it has been found that quality assurance and improvement have long been viewed as an important element of their role, and questions have been raised about the value added by the mechanisms imposed from outside universities for the purposes of 'measuring quality' (Bowden & Marton, 1998; Blackmore, 2004, cited in Abbas & Mclean, 2004; Cheng, 2009). Individual academics stress the importance of self-regulation and peer review as the methods for quality assurance that are held in the highest esteem (Vroeijenstijn, 1995; Radloff & de la Harpe, 2007; Macfarlane, 2009). Another important factor that underpins the ability of academic staff to assure and improve their activities is academic training and ongoing professional development which enhance their capability for personal learning and reflection, and increase their breadth and depth of disciplinary understanding (Boud, 1999; Akerlind, 2005).

Jackson (1997a) observed that quality assurance was also influenced by exchanges between academic staff within academic units and over disciplinary networks. The role of the discipline is an important one because it contributes to the rules and procedures for the control and coordination of teaching, learning and research. However, these requirements are in addition to the systems of structure established by an academic unit and university for quality assurance. Tensions can then arise when the methods and measures selected by a university (or at another level of the system) are perceived as being imposed uncritically, and/or based on an assumption that academic staff are not paying adequate attention to the improvement of their teaching, learning and research. For example, it has been suggested that greater cooperation is required amongst individual academics for the development of coherent curricula, information systems regarding student learning, and the use of those systems to improve student learning outcomes (Dill, 2000; Kuh & Ikenberry, 2009). This appears to down-play the pivotal role of course coordinators who are charged with the

fulfilment of these functions, often in the absence of any formal training or support provided either by their academic unit or university (Ladyshewsky & Jones, 2007).

To summarise, I propose that the role of an individual academic is one of combining individual, disciplinary, academic unit and university requirements for quality assurance (i.e., comprising the methods and measures for internal and external accountability) with a process of critical inquiry to inform the continuous improvement of their teaching, learning and research. The result is a complex and evolving process where trade-offs are made between the use of particular methods and measures depending on their perceived relevance to the task at hand, such as planning a new course, exploring ways to improve student learning, or devising a research proposal. This suggests that the nature of quality assurance at this level of the system is dynamic with methods and measures being re-made and re-shaped to fit the values, ideologies and behaviours of individuals and disciplinary groups.

Disciplines

Henkel (2000) found that academics were most likely to articulate definitions of quality in relation to their disciplines which formed the basis of shared values, behaviours and beliefs. Other authors have extended this idea with the observation that expressions of quality have traditionally been communicated within disciplinary frameworks that extend beyond the boundaries of universities (Becher & Kogan, 1980; Jackson, 1997a; Brennan & Shah, 2000; Cheng, 2009).

The role of a discipline within the higher education system was summarised in Chapter 3 (p. 58) and included self-limiting controls and external reference systems for the creation, preservation, transferral and evaluation of knowledge. Consequently the discipline could be viewed as providing a system of structure for teaching, learning and research comprising an internal accountability component (through self-regulation) alongside external accountability requirements for peer review applied to research outputs and teaching practices (Jackson, 1997a; 1998; Radloff & de la Harpe, 2007).

Summary

Table 18 summarises the discussion of the roles and functions of the different elements in relation to quality assurance and improvement in the higher education system including their systems of structure. The Table is used as a point of departure for the following section which explores quality assurance in the New Zealand context.

Table 18: Quality Assurance and Improvement Roles, Functions and Systems of Structure for Elements in the Higher Education System

System Level	Role and Function	Systems of Structure
Central Level (Government)	Establishes a broad framework—comprising measures and methods of performance assessment—against which universities are required to demonstrate their external accountability. This includes the implementation and reporting of measures to assess the performance of the higher education system, the identification of threshold standards for the operation of universities, and the establishment of agencies (audit and/or accreditation) to assess the performance of individual universities against the standards.	Rules and methods for performance assessment and reporting Accreditation standards, criteria and processes Audit manuals that outline processes, topics and expectations for evidence
University	Selects, applies and continuously evaluates methods and measures to determine whether or not the university is behaving in accordance with the institutional identity. Uses methods and measures judiciously and for the purposes of improving activities and services. Endeavours to achieve a balance between the methods and measures used for external accountability purposes, and those important for internal evaluations consonant with the institutional identity.	Broad plans and policies Quality assurance frameworks Performance indicators and measures of satisfaction Allowance of external scrutiny
Academic Unit	Selects, applies and continuously evaluates methods and measures for determining whether or not it is behaving in accordance with its own identity and that of the university. Uses methods and measures judiciously and for the purposes of improving activities and services. Negotiates a balance between the methods and measures used for accountability purposes at other levels of the system, with those important for evaluations consonant with the academic unit identity.	Broad plans and policies Quality assurance frameworks Performance indicators and measures of satisfaction Allowance of external scrutiny
Academic staff	Combine individual, disciplinary, academic unit and university requirements for quality assurance (i.e., comprising the methods and measures for internal and external accountability) with a process of critical inquiry to inform the continuous improvement of their teaching, learning and research.	Discipline-based Self-regulation Academic training Peer review

Discipline	Provides a framework for internal and external accountability at the level of the individual academic in terms of the methods for a controlled and self-limiting approach to knowledge creation, preservation and transfer, and defined networks of peers who form an external reference system for the development, evaluation and communication of knowledge.	Methods for knowledge creation, preservation and transmission Networks of peers who provide an external reference system

ROLES, FUNCTIONS & QUALITY ASSURANCE SYSTEMS OF STRUCTURE IN NEW ZEALAND

New Zealand Government

The New Zealand Government has established a broad framework within which Tertiary Education Organisations (TEOs) are required to demonstrate external accountability. The framework consists of three main elements: provision of quantitative and qualitative data regarding the performance of TEOs; recognition of TEOs and their qualifications on national registers; and engagement in regular reviews conducted by one of the Government approved "Quality Assurance Bodies" (QABs) (MoE, 2006a). Compliance with each and all of the elements is required in order to access Government funding and ensure that students can receive Government assistance for study in the form of student loans and allowances (State Services Commission, 2005).

Agencies identified by the Government as having a role in the quality assurance of TEOs are the MoE, the NZQA, the NZVCC and the TEC. Each of these agencies are set out in the Education Act (1989) and the functions of the MoE and TEC were outlined in Chapter 4 in terms of policy, and system planning, funding and monitoring (pp. 58-59). The two QABs—NZQA and NZVCC—are discussed below where mention is also made of the specific functions carried out by the TEC which affect quality assurance in the tertiary education sector.

The NZQA has an overarching role in relation to quality assurance of secondary and post-secondary education and training both for TEOs and their programmes of study (MoE, 2008b). Functions of the NZQA include maintaining the systems of structure for quality assurance: accreditation of TEOs and audit of all TEOs other than universities; administration of the National Qualifications Framework; maintenance of the New Zealand Register of Quality Assured Qualifications; and evaluation of qualifications gained overseas for the purposes of employment and immigration (Education Act, 1989; MoE, 2008b; State Services Commission, 2005). Of particular importance is the Register of Quality Assured Qualifications which is reported to 'manage quality' through the imposition of basic regulatory frameworks such as the requirement for all qualifications to have an 'outcome statement' (MoE, 2008b). The Register has been identified as a key feature that fulfils New Zealand's obligations to publicly report all accredited qualifications within a single

framework (Quality Assurance Expert Advisory Group, 2007). However, tensions have arisen from the imposition of the Framework and the desire of different sub-sectors within the tertiary education system to communicate the development, delivery, and outcomes of their qualifications in different ways (2007).

The Education Act (1989) empowers the NZVCC "to set up inter-university course approval and moderation procedures" (Section 241). NZVCC discharges its quality assurance functions through separate audit and accreditation structures[6] – the CUAP established in 1990 with the authority to approve programmes of study offered by universities in New Zealand, and the NZUAAU established in 1993 to conduct regular and independent audits of each university's 'quality systems' (Woodhouse, 1998; Meade & Woodhouse, 2000; MoE, 2006b; Cameron, 2010). Collectively the CUAP and NZUAAU are the university "QABs" that conduct the regular reviews required as part of the Government's accountability framework.

The CUAP operates a system of accreditation and approval that is believed to be unique in the world (Milne, Lemaitre del Campo & Liston, 2005). Approval of programmes of study is based upon the peer review of programme proposals by staff in relevant disciplines at other universities, followed by assessment and review of the feedback by representatives of each university (Milne et al., 2005; CUAP, 2010). Approvals given by CUAP are forwarded to the relevant Government agencies (e.g., NZQA) so that appropriate adjustments can be made to the New Zealand Register of Quality Assured Qualifications and funding can follow (CUAP, 2010).

The role of the NZUAAU is broadly captured in the description of audit agencies provided previously, namely to conduct regular and independent audits of each university's capacity for achieving its stated objectives and assuring the quality of its programmes of study (NZUAAU, 2005c). In addition to conducting audits the NZUAAU has assumed a role of disseminating 'good practice' and assisting universities to improve the quality of education provided (NZUAAU, 2005c). Evidence for the achievement of this outcome was provided by Meade & Woodhouse who observed that the NZUAAU had been a catalyst for attention to quality improvement at university level but that this was associated more with the university-wide self-reviews conducted in preparation for an external audit, than the external audit process itself (2000). Shah and Treloar (2007) noted that the NZUAAU had been successful in increasing attention to matters of 'quality' in New Zealand especially in

[6] In line with trends in the literature, a number of accreditation agencies have also evolved independently for the purposes of setting professional standards and influencing the education and training of students within universities. Examples of such agencies include professional bodies such as the New Zealand Institute of Chartered Accountants and the Institution of Professional Engineers New Zealand, and they too play a role in the external accountability framework of professional programmes offered by universities (Watts, et al., 1987). However, there is one notable exception to the independence of programme accreditation agencies and that is the New Zealand Teachers Council which has authority through the Education Act (1989, Section 139AE) to establish and monitor standards for qualifications leading to the formal registration of teachers.

relation to methods and measures for monitoring (i.e., quality assurance) but uncertainty remained regarding the depth of that focus.

The quality assurance functions of the TEC are an integrated part of the planning, funding and monitoring systems it is charged with developing and implementing across the tertiary education sector. The responsibility of the TEC includes the development of generic frameworks and measures for the robust and objective assessment of TEO performance based on performance indicators and threshold benchmarks (TEC, 2005; Cabinet Business Committee, 2006). In addition, the TEC's role in the design and development of TEO Investment Plans also provides a platform for embedding methods and measures for external accountability in TEO performance plans.

Returning briefly to the role and function of Government in relation to quality assurance presented in Table 18, it is clear that a defined framework exists against which universities are required to demonstrate external accountability. Reporting measures and threshold standards evolve according to the work of the TEC while audit and accreditation agencies are present for the purposes of accreditation and review of universities and their programmes of study.

New Zealand universities

New Zealand universities have adopted an approach to quality assurance based upon more general frameworks for quality management comprising 'Plan, Do, Study, Act' cycles (see Chapter 2, p. 5). Evidence for this observation can be found in university 'self-review portfolios' compiled in preparation for academic audits conducted by the NZUAAU. The quality frameworks presented in the documents typically link university plans and strategies to processes for review which are used to guide ongoing evaluation and improvement of teaching, learning and research (see for example Auckland University of Technology, 2006; Massey University, 2008; University of Otago, 2006). This general approach to quality assurance is consistent with the functions of universities presented in Table 18 regarding the selection and application of methods and measures for the purposes of improving activities and services in line with the institutional identity. What is less apparent is the ability of universities to balance frameworks for internal quality assurance with those applied externally for accountability purposes.

A strong awareness of quality at TEO levels was reinforced in the findings of Goedegebuure et al. (2007) who associated attention to matters of quality with the support for institutional autonomy and the national framework for quality assurance advanced through the Education Act (1989). Exploring the Education Act (1989) for occurrences of "quality assurance" links the term with the TEC's planning, funding and monitoring systems (Section 159N), requirements for programme delivery to international students (Section 232; 238I) and the audit and accreditation functions of the NZQA (Sections 159AD; 253, 1ea) and NZVCC (Section 159AD). Only one mention of the more general concept of "quality" is made in the

general provisions for tertiary education which "foster, in ways that are consistent with the efficient use of national resources, high quality learning and research outcomes, equity of access, and innovation" (Section 159AAA, a). It is also interesting to note that there is no mention of the term "improvement" in any part of the Education Act (1989).

Given that the Education Act (1989) includes no explicit statement of the role and function of universities regarding quality assurance and quality improvement, the meanings of these terms developed and promulgated by the TEC, NZQA and NZVCC could assume greater weight as a consequence. As discussed earlier in the Chapter, these agencies focus almost entirely on accountability with the foundation being that universities are required to demonstrate their accountability to the TEC in relation to the funding they have received (Education Act, 1989). This includes a full financial report for the current year "and a statement of service performance that compares the performance of the organisation with the outcomes specified in the organisation's plan as measured by the performance indicators specified in the organisations plan" (Section 159YD). Further, Section 159YK of the Education Act (1989) specifies that any changes to the performance indicators used by an organisation would constitute a 'significant amendment' requiring collaboration with the TEC during the development of a change proposal. Therefore the ability of universities to balance frameworks for internal quality assurance with those applied externally is effectively constrained by external accountability requirements. Consequently, and despite their institutional autonomy, it could be argued that New Zealand universities lack the freedom required to fully implement the quality assurance functions outlined in Table 18.

The role and function of academic units, academic staff and disciplines

In Chapter 4 the academic audit reports provided by the NZUAAU, and publicly available self-review portfolios compiled by individual universities were used to gain insight into the functions of academic units, academic staff and disciplines within universities. These reports are used once again in this section to explore the functions of these system levels in relation to quality assurance in the New Zealand context.

Academic Units

The audit material corroborates the academic unit functions presented in Table 18, affirming their responsibility for the development of quality assurance processes and structures (Massey University, 2008; NZUAAU, 2005b; 2006a; 2009), and for 'quality improvement' in relation to teaching and research (NZUAAU, 2005b; 2007; University of Otago, 2006). Explicit mention is made of operational responsibility for quality assurance in relation to course design and student achievement (Massey University, 2008; NZUAAU, 2005a; NZUAAU, 2006a; NZUAAU 2006b; NZUAAU, 2007; NZUAAU, 2009; University of Otago, 2006).

The quality assurance functions of academic units are discharged through the implementation of monitoring systems (including individual staff appraisals) and regular

reviews, and the use of outcomes from these processes to improve teaching and research (NZUAAU 2005a; 2006a; 2006b; University of Otago, 2006). The importance of independent and external review is highlighted as occurring either through engagement with professional accreditation agencies where relevant, or via a process of benchmarking with other universities and organisations (NZUAAU, 2005b; University of Otago, 2006; Massey University, 2008).

The Role of Disciplines

The academic audit material indicated that the role of the discipline was primarily understood as an external reference system for the design, development, delivery and evaluation of programmes of study (University of Otago, 2006; NZUAAU, 2005a; 2005b; 2006a; 2009). There was also a suggestion that the discipline provided the basis for academic staff research and expertise (Massey University, 2008) along with 'academic standards' which were not specifically defined (NZUAAU, 2005a; 2006a). These ideas regarding the role of the discipline are broadly consistent with the summary statements provided in Table 18.

The Role of individuals

The idea of individuals engaged in a process of continuously improving their teaching, learning and research (Table 18) was reinforced in the audit documents especially in relation to participation in reviews, and engagement with ongoing professional development (NZUAAU, 2006b; University of Otago, 2006; Massey University, 2008).

Summary

In the New Zealand context, the systems of structure and systems of meaning for quality assurance are closely interrelated and formally documented only at a national level. Information about quality assurance and improvement within universities is partial at best although the academic audit material provided some insight into the operation of quality assurance at various system levels. Comparing the information regarding structures in the New Zealand context with the summary provided in Table 18 there is evidence to suggest broad alignment of the roles and functions with those distilled from the literature. However, there is a significant issue that appears to emerge from a 'blurring' of roles and functions related to quality assurance across different levels of the system.

The complexity of the existing rules and procedures for quality assurance were observed by Goedegeburre et al. (2007) to obscure, rather than enhance, the accountability of TEOs to New Zealand society. The same study also noted that the transaction costs of maintaining separate systems for the quality assurance of different TEO types (e.g., universities, private training providers, polytechnics) and their qualifications were perceived to be unwarranted (2007). It is possible that this assertion is a function of a lack of clear responsibility for the design and implementation of systems for quality assurance, accountability and quality improvement across different levels of the tertiary education sector. Responsibility for

quality assurance is not specifically designated to TEOs within the Education Act (1989) but to national agencies such as the NZQA, TEC and NZVCC. That said, the academic audit material from universities showed that quality assurance systems were in place and took various forms at academic unit, discipline and individual levels. The general approach within universities is arguably consistent with the 'need-based' evaluations likely to support quality improvement. However, the idea of methods and measures devised, combined, and implemented, based on the evolving needs and goals of a university, an academic unit, a discipline, or an individual runs counter to the general and generalisable nature of the quality assurance frameworks and indicators implemented by national agencies.

Earlier in the present Chapter it was suggested that quality assurance was conflated with the accountability requirements set by government and its agencies, while responsibility for quality improvement lay with individual TEOs. The divide this places between quality assurance and quality improvement is exacerbated by the systems of structure for quality assurance which appear to devalue information provided by the universities themselves (e.g., through the formally audited annual reports and academic audit reports). For example, the focus on improving the quantity and quality of information about the performance of TEOs – collectively and individually – is identified as a function of Government discharged through agencies such as the TEC (MoE, 2006b). TEOs are expected to participate in the design of this process, but with a focus on refining general and generalisable methods and measures that can be applied across the system, and potentially at the expense of the varied and need-based approaches required for quality improvement. These ideas are consistent with the findings of the State Services Commission (2005) that the functions of the three main government agencies (MoE, TEC and NZQA) were overly focused on the design and implementation of standardised processes to support education policies without consideration of the appropriateness and effectiveness of those processes or policies (State Services Commission, 2005).

SYSTEMS OF PROCESS

The process of 'evaluation' is fundamental to quality assurance and universities. This section explores the evaluation process, including common methods, and contrasting more 'general' approaches to the assessment of teaching and research with evaluations for quality assurance purposes and the processes of accreditation and audit. The argument presented is that quality assurance evaluations comprise a pre-defined and sequential approach whereas the purposes, methods and outcomes are largely determined in advance. In contrast, evaluations of teaching, learning and research have multiple purposes and outcomes advanced through a flexible combination of methods applied '*in-situ*'.

The discussion was complicated by the inconsistent and interchangeable use of terminology within related literature (e.g., evaluation, assessment, review), coupled with different views about the validity and reliability of various methods (e.g., peer-review, self-reflection and self-review, performance indicators). Indeed, much of the literature examined for the

present research centred on the 'methods' of 'evaluation' rather than their purposes or outcomes. The section attempts to address this oversight by examining 'general' evaluations of teaching, learning and research in universities, particular methods that contribute to the evaluation process, and quality assurance evaluations. As the discussion evolves, differences between the evaluation of teaching, learning and research and quality assurance evaluations become increasingly evident. Main points are captured in a summary presented at the conclusion of the section.

General evaluations of teaching, learning & research

The evaluations conducted in support of the higher education mission described in Chapter 4 generally focus on the assessment of teaching, learning and research. In the literature examined for this study, evaluation was discussed as a political and value-laden activity constrained by the context in which it was applied. Stufflebeam (2001) described evaluation in terms of gathering information that could inform judgements about the object being evaluated. King (2006) proposed an alternative definition as the "systematic determination of merit, worth, and significance" (p. 39). Other authors have focused on the evaluation process as complex series of tasks involving value judgements and choices in relation to the focus, purpose(s), methods, measures and participants (Readings, 1996; Winch, 1996; Beecham, 2009). Evaluation is therefore context specific and the outcomes of an evaluation process are unlikely to provide a 'final answer' as much as alternative ways and means of exploring a question (Readings, 1996; Winch, 1996; Harvey & Newton, 2005).

Evaluation of Teaching & Learning

The teaching and learning process was outlined in Chapter 4 as a complex activity dependent on the interaction and engagement that occurs between students, teachers and the curriculum. In relation to the evaluation of teaching and learning, the design and implementation of student assessment activities is mentioned relatively frequently in the literature as a pivotal factor (Horsburgh, 1999; Knight, 2002; Barrie, Ginns & Symons, 2008; AUQA, 2009; Bloxham, 2009; Harvey & Williams, 2010b). Assessment of student work in universities is a process used to evaluate student academic achievement and provide information—to students and teachers—regarding how individual performance can be improved (Crooks, 1988; Brown & Knight, 1994; Education Review Office, 2006). Assessment has both social and dialogical elements that are individually constructed according to the experience of the staff member and the traditions of the discipline (Bloxham, 2009; Hernard, 2010). The focal point for evaluations of teaching and learning is therefore likely to be at a local level where personal, environmental and disciplinary factors combine to influence the teaching and learning process (Winston, 1994; Skelton, 2005).

Hernard observed that promising approaches to the enhancement of teaching comprised a combination of activities including professional development programmes, focused support for course design and course evaluations. He also noted that the approaches were often iterative, taking years to develop as various combinations were tried and tested (2010). The idea of combining multiple methods and sources of information for the evaluation of

teaching and learning is well-founded in the literature (Ramsden & Martin, 1996; Stufflebeam, 2001; Chalmers, 2007; Ewan, 2009; Hernard, 2010). The involvement of a variety of stakeholders (e.g., students, employers, other staff in the university) is especially important as it tends to focus the evaluation on the important questions, enhance the validity and ownership of the results, and provide information likely to support decision-making regarding improvement (Stufflebeam, 2001; Chalmers, 2007; Ewan, 2009). Examples of particular methods for evaluation are detailed later in this section and include peer review, self-review, performance indicators and benchmarking.

Quality assurance evaluations seek to reduce the complexity of the teaching and learning process by focusing on particular factors that can be measured, often numerically (Horsborough, 1999; Beecham, 2009; Chalmers, 2007). There is also a tendency to emphasise documented artefacts and outputs of teaching and learning which can be investigated by assessors within universities and from external quality assurance agencies (Astin, 1997; Skelton, 2005; Coates, 2010). Such artefacts include course aims and outcome statements developed to communicate the 'standards' expected of successful graduates (Hernard, 2010). Surveys of student satisfaction, engagement, and/or experience also feature prominently in the quality assurance processes of universities (Henkel, 2000; Goedegeburre et al., 2007; Australian Council for Educational Research, 2008; Barrie et al., 2008; Chalmers, 2008; Hernard, 2010; Harvey & Williams, 2010a), and in some cases the survey results have provided the means to codify dimensions of learning and teaching in university-level frameworks for ongoing measurement and investigation (Australian Council for Educational Research, 2008; Barrie et al., 2008). However, these high-level frameworks overlook what is potentially the most important factor in the evaluation and improvement of teaching and learning, that being the experience and capability of individual staff members (Chalmers, 2008).

Skelton (2005) observed in relation to discourses of 'teaching excellence' that they were increasingly associated with the use of "planned systems, resources, standardised processes and predetermined outcomes" (p. 170). In another study of assessment practices in the United Kingdom, Bloxham (2009) noted that the focus on developing standard procedures and frameworks provided an "illusion of confidence… skewing assessment design away from that which supports learning towards that which serves mainly 'certification' and 'quality assurance'" (p. 214). It is possible that evaluations of teaching and learning for quality assurance purposes follow the thread of these quotations in terms of a linear and sanitised representation of the more promising multi-method multiple source approaches advocated by Hernard (2010). Quality assurance frameworks provide the illusion of order and the confidence that comes with a standardised and transparent process. The overall result is a high level of predetermination in the methods and measures of teaching evaluation supported within universities, potentially at the expense of activities aimed at enhancing the understanding and improvement of teaching and learning within academic units and disciplines (Ramsden & Martin, 1996; Jones, 2003). Indeed, a study by Horsburgh (1999) found that activities pursued in the name of quality assurance had very little impact on the

quality of teaching and learning because the monitoring procedures did not focus on teacher practices or the curriculum.

Evaluation of Research

Research evaluation is largely based upon the scrutiny of research 'outputs' produced by individuals or groups within universities (Astin, 1997). There are essentially two dimensions to research evaluation based upon the 'quality' and 'quantity' of the outputs. In relation to an evaluation of 'quality', the process is heavily reliant on the use of peer review to provide expert assessment of the contribution to knowledge, and the acceptability of that contribution to discipline-based knowledge communities (Adams, 2008). Numerical indictors of scholarly works in the public domain (e.g., journal articles, conference papers, books) provide measures of research 'quantity' alongside financial dimensions such as research grants and income (Stella & Woodhouse, 2007; Hanover Research Council, 2008).

Becher & Trowler (2001) observed that the evaluation of research 'quality' was tacit with the assessment carried out within discipline communities. Consequently, while experienced researchers have developed understandings of what counts as 'prestigious' in their discipline—whether that is publication of research outputs as books or in pre-eminent journals—this knowledge is not easily accessible to people outside of the discipline (2001). On the other hand, counts of research outputs and accumulated research funding are widely available across higher education systems. Indeed, the use of such measures within universities for the purposes of performance appraisal and improvement is commonly practiced (Taylor, 2005).

Evaluation of research for quality assurance purposes attempts to mix 'quality' and 'quantity' measures in formulae and frameworks. For example, scholarly databases housing thousands of research publications are increasingly used to count the citations of individual authors in other articles (a quantity measure) as an indicator of their contributions to the discipline (a quality measure). However, few attempts are made to mitigate the limiting factors of this approach which have been identified as a bias toward publications in English and the physical sciences (Smart & Weusten, 2007).

The impact of external quality assurance processes on research has been observed as small relative to teaching and learning (Harvey, 2006; Harvey & Williams, 2010a). The reason proposed was that the generic frameworks and documented procedures associated with quality assurance offered little to the established procedures for peer review and measures of research outputs (Harvey, 2006). However, alternative views have posited that externally imposed frameworks for research evaluation have had a significant impact in that they increasingly define what is valued in a research context (Henkel, 2000). For example, the unintended consequences of using research output measures to allocate research funding have been observed to reinforce a short-term focus at the expense of more basic research that could have a longer-term impact (Henkel, 2000; Adams, 2008). This possibility has been recognised in a recent report from the OECD (2008a) which argued that the criteria for

research evaluations needed to be broadened beyond that which was immediately measurable so as to ensure research was conducted with a longer term perspective.

In summary there are similarities between evaluations for teaching and learning and for research. In both cases there is a need to combine evidence from multiple methods and sources in order to inform improvements to processes and outcomes. In relation to research, Adams (2008) referred to this as 'getting the whole package right: income, training, staffing, outputs and outcomes… research is complex and no single indicator will do" (p. 59). In relation to teaching, Hernard (2010) observed that promising approaches to evaluation and enhancement were also based on the packaging of various activities in line with the needs and aspirations of a university. Similarities can also be found in the processes for quality assurance evaluations of teaching, learning and research. In each case there is a strong focus on documented artefacts of the activities and the development of formalised evaluation frameworks comprising selected methods and measures.

Evaluation methods

Evaluations of teaching, learning and research for quality assurance and/or quality improvement purposes derive from three basic methods and sources of evidence: performance indicators, self-reflection and self-review and peer review. Each of these methods are investigated in the next sections along with 'benchmarking' which combines the methods with selected external reference points.

Performance Indicators

The use of performance indicators in higher education has been linked directly to the introduction of NPM agendas and in particular to the improvement of financial management and performance assessment in universities (Harvey & Green, 1993; Borden & Botrill, 1994; Barnetson & Cutright, 2000). More recently, these links have been recast such that performance indicators provide an essential component of the 'evaluation and accountability' frameworks that operate internally and externally to universities (Department of Education, Science and Training, 2004; Rowe, 2004 cited in Chalmers, 2008; Chalmers, 2010).

Although there is no common definition of a performance indicator, general observations regarding their design include connections to desired objectives, measurability, and the need for indicators to be easily comprehended by those who use them (Education Review Office, 2006; Chalmers, 2007). Performance indicators have been described as distinct from other forms of information in that they include explicit norms which provide reference points for judgements about the value of a system or function (Borden & Botrill, 1994; Association of Universities and Colleges of Canada, 1995; Chalmers, 2008).

'Typologies' of performance indicators for teaching and learning can be found in the quality assurance literature and in relation to the systematic monitoring of 'inputs, processes and

outputs (and/or outcomes)' in universities (e.g., Association of Universities and Colleges of Canada, 1995; Ewell, 1999; Chalmers, 2008; Coate, 2010). Frequently cited measures are quantitative and include student qualifications on entry to a university, financial information, student retention, progression and success rates, graduate employability, and students' satisfaction ratings of their learning experience and teaching quality (Higher Education Funding Council for England, 2003; McPherson & Shulenburger, 2006; European Association for Quality Assurance in Higher Education, 2007; Stella & Woodhouse, 2007). Conversely, the performance indicators reported to be used by university leaders for more general evaluation purposes are communicated in more qualitative terms such as "the successful implementation of new initiatives; producing significant improvements in learning and teaching quality, establishing a collegial working environment, and delivering agreed tasks on time and to specification" (Scott et al., 2008, p. 62).

The relative value of quantitative versus qualitative performance indicators has also been discussed in the literature. Quantitative measures are used mainly for establishing a shared and objective account of something as opposed to enhancing understanding of it (Smith, 1989; Vroeijenstijn, 1995). This point is the basis for arguments against quantitative performance indicators for quality improvement purposes as their selection is often determined by the availability of data—whether or not the data can be used to inform improvements in teaching, learning and research (Harvey & Green, 1993; Borden & Botrill, 1994; Jones & Darshi De Saram, 2005; Chalmers, 2008). Instead, the use of more qualitative measures—which act as proxies for intended goals and incorporate descriptive information about the context in which they are applied—are generally agreed as providing information that can enhance understanding and therefore inform improvement in universities (Harvey, 2002; Jones & Darshi De Saram, 2005; Vidovich & Currie, 2006; Chalmers, 2008; Hernard, 2010). Ironically, the actual impact of performance indicators—quantitative or qualitative—on the improvement of teaching, learning and research within universities remains unclear (Vroeijenstijn, 1995; Kis, 2005; Chalmers, 2008; Beecham, 2009). This ambiguity is likely to be associated with the nature of performance indicators as aggregate measures of complex systems which are often at university or sector levels where the practice of teaching, learning and research within academic units and disciplines is obscured (Borden & Bottrill, 1994; Lueger & Vettori, 2007; Cameron, 2009).

The reality of performance indicators—quantitative or qualitative—is that their validity and reliability are influenced by numerous factors such as assumptions made during data collection, 'lag and lead' times between collection and use and whether or not they can be made to work in the task of improving teaching, learning or research (Chalmers, 2008). Explicit recognition of some of these limitations has been made in the Australian context where the Department of Education, Science and Training adjusts quantitative performance indicators on the basis of factors known to influence their validity such as discipline, level of study, student entrance qualification, university size, and labour market indices (2004). Perhaps the main issue in the design, development and implementation of performance indicators is explicit recognition of their function as 'political levers' which communicate

the motivations of the parties involved (Barnetson & Cutright, 2000; Schmidtlein, 2004; Chalmers, 2008). Political agendas for performance indicators are especially salient where a direct relationship exists between performance indicators, public accountability and access to public funding (Ewell, 1999; Barnetson & Cutright, 2000; Goedegeburre et al., 2007).

In summary, key messages about performance indicators derived from the literature, be they qualitative or quantitative, are that they are only one of the methods that can be used to inform evaluation of a function, process or system. Context is critical because performance indicators are subject to interpretation and adjustment depending on political, social and economic factors at different levels of the higher education system (Association of Universities and Colleges of Canada, 1995; Kis, 2005; Chalmers, 2010). In light of these dependencies, a real danger of performance indicators lies in the increasing tendency to use them as synonyms for 'quality', and for variations in measures applied over time to be synonymous with 'quality improvement (or decline)' (Lock & Lorenz, 2007; Lueger & Vettori, 2007). Referring back to the definitions of quality assurance and quality improvement proposed earlier (pp. 97-98), a general point is particularly relevant to the discussion on performance indicators namely, methods and measures used in the absence of (or as a substitute for) a process of critical enquiry serve only the purposes of accountability. Therefore, if quality assurance/improvement is to be conceived more broadly than accountability, any implication that performance indicators are surrogates for 'quality' requires correction.

Peer Review

Peer review describes the scrutiny of ideas, practices, or products by members of one's intellectual or professional cohort and is arguably the most prevalent and preferred method for the evaluation of research and teaching quality in universities (Becher & Kogan, 1980; Ceci & Peters, 1982; Moodie, 1986; Williams, 1986; Borden & Bottrill, 1994; Ramsden & Martin, 1996; Kogan, 1999; Tight, 2003; Kis, 2005). There was agreement within the literature examined for the thesis that the evaluation of quality is essentially subjective, demanding expert knowledge that is most likely found within academia (Moodie, 1986; Williams, 1986; Kogan, 1999): "the only possible means of auditing a high degree of expertise is through the independent application of the same expertise" (Becher & Kogan, 1980, p. 171). Thus the basis for peer review in teaching and research can be found in the frameworks and networks governing the controlled and self-limiting approach to the development and dissemination of knowledge (Schmidtlein, 2004). In other words, the role and function of academic staff and disciplines as set out in Chapter 4 (p. 58) provide the means and the expertise for the application of peer review.

In their study of the reliability of peer review, Ceci & Peters (1982) found that the process tended to favour academic staff with established reputations even though the quality of their work may have been the same as that provided by lesser known staff. Smith (2008) observed that peer review worked more effectively in disciplines such as the sciences, where standards for data collection, analysis and presentation were relatively stable. He contrasted

this with peer review in social sciences and the arts where judgements were more closely tied to the values and experiences of the reviewers and were therefore less reliable (2008). Consequently, "peer review is a political act" (Morley, 2003, p. 111) influenced by factors such as the knowledge held by 'experts', the ways in which experts are selected, and the broader socio-political climate that contributes the values and criteria that guide expert judgements (Williams, 1986). A basis for criticism of peer review lies in the absence of perceived objectivity associated with more quantitative methods such as the performance indicators discussed previously. It is perhaps in response to this criticism that 'peer review' in the context of quality assurance evaluations tends to be undervalued (Ryan, Hanrahan & Duncan, 2000) and is coupled with some form of external validation in order to mitigate any tendency for self-referencing (Carmichael et al., 2007).

Self-Reflection and Self-Review

There are a variety of terms used in the literature to describe the process of self-review conducted within universities by academic staff, committees, boards, academic units and others: internal review; self-reflection; self-study; self-critique; self-assessment; self-evaluation and self-appraisal to name a few. In the following discussion I make a distinction between self-reflection as a process of exploring assumptions, values and perspectives in order to identify ways in which practice could be improved, and self-review which uses a variety of methods specifically for quality assurance purposes.

The idea of self-reflection described above is closely linked to Schon's (1991) reflective practitioner. The reflective practitioner forms appropriate questions, gathers answers, and takes appropriate action to enhance understanding and learn through experience (Schon, 1991; Loughran, 2002). Reflective practice applied to teaching refers to the process of learning and understanding through systematic inquiry and problem-solving (Loughran, 2002; Parsons & Stephenson, 2005). When applied to research, self-reflection can be found in the custom and practice of acknowledging previous work, describing the present investigation, and incorporating a discussion or conclusion which outlines the limitations of the study and its place in the context of related and future research.

Cole (1997) observed that self-reflection was not sufficiently respected or supported within education organisations as a valid method of evaluation. This could be due to what Schon (1991) observed as the priority placed on 'objective' forms of evaluation incorporating quantitative measures as opposed to more narrative accounts of learning through experience. Moreover, differences in the locus of control between 'self' and 'others' threaten the "search for centrally administered, objective measures of student progress, toward independent, qualitative judgements and narrative accounts of experience and performance in learning and teaching (1991, p. 333-334).

Contrasted with the idea of self-reflection as a means of improving practice, evaluations for quality assurance purposes use self-review as a pre-requisite for external validation processes, including accreditation and audit. Harvey (2002) suggested that the process of

self-review was a challenging one because although an open and honest investigation could identify areas for future improvement in any setting, the threat of external scrutiny and judgement could place the self-reviewer in a defensive position where justification of the status quo framed the response. Questions remain regarding whether self-reflection and self-review can be reconciled for the purposes of improvement and quality assurance. The definition of 'quality assurance' discussed earlier in this Chapter (methods and measures for internal and external accountability) provides a potential way forward whereby self-reflection is conceived as one of the methods used to inform a self-review.

I propose that the process of self-reflection is an inherent part of academic work which is encapsulated in the role and function of disciplines and individual academics. The role of the discipline has been discussed earlier (p. 108) as including the self-limiting controls and external reference systems for the development, evaluation and communication of knowledge. The role of academic staff has also been described in terms of applying a process of critical inquiry to inform the continuous improvement of teaching, learning and research. In each case it could be argued that self-reflection forms an integral part of the research and teaching process whether or not it is explicitly acknowledged.

Benchmarking

The idea of a 'benchmark' appears to have its origins in the mid nineteenth century where surveyors chiselled marks in stone to provide a reference point for future measurements (Wurm & Smith, 2008). The process of benchmarking is not specifically defined in the literature, although some authors agree that it involves the identification of a reference point (or points) against which performance can be compared and a determination made about the nature of that performance (Chalmers, 2007; Stella & Woodhouse, 2007).

The simplest form of benchmarking involves the use of numerical performance indicators calculated within universities and compared with measures available externally (Chalmers, 2007). In a study of the academic audit reports of Australian universities it was noted that this form of benchmarking was commonly employed at university level and frequently used as a way of enhancing institutional reputation as opposed to the improvement of teaching, learning and research (Stella & Woodhouse, 2007). The main criticism of benchmarking based on performance indicators is the lack of consideration given to contextual factors such as the institutional identity when comparisons are made (McPherson & Shulenburger, 2006; Chalmers, 2007). Despite this criticism, opportunities to engage with this form of indicator-based benchmarking are increasing as research agencies undertake national and international student surveys. For example, the Australian Council for Educational Research promotes opportunities for benchmarking methods and measures as one of the advantages of subscribing to the Australasian Survey of Student Engagement (2008). Indicator-based benchmarking also provides the fodder for university rankings agencies which collate the information and apply metrics so that comparisons can be made and a 'rank order' of universities produced (Saisana & D'Hombres, 2008; Institute for Higher Education Policy, 2009).

'Subject benchmark' statements that identify the competencies expected of graduates from different subject areas is another form of benchmarking promulgated by the Quality Assurance Agency in the United Kingdom[7]. Subject benchmarks combine the processes of peer and self-review ostensibly for the purposes of public accountability and quality improvement. This outcome is essentially achieved via the development of graduate competency statements by representatives of discipline groups across multiple universities (a form of peer review), promulgation of those statements to members of the public (a form of public accountability), and the encouragement of disciplinary groups within universities to compare their processes for learning and teaching against the statements (a form of self-review and quality improvement).

Benchmarking can also be undertaken formally or informally between universities and this has been affirmed as leading to productive exchanges (Stella & Woodhouse, 2007). Comparisons of programmes of study, policy and processes are arguably quite common within and across universities and pursued for the purposes of validating and/or improving approaches and outcomes (Scott, 2004; Shah & Treloar, 2007).

Benchmarking, like self-reflection and review, peer review and performance indicators, comprises different approaches and methods that can be combined for different purposes. It could be for this reason that studies of academic audit outcomes in Australia, Europe, New Zealand and South Africa have observed a lack of clarity around the purposes, processes and outcomes of benchmarking (Shah & Treloar, 2007; Stella & Woodhouse, 2007). It may also be that the key issue is not about how benchmarking can be improved in universities, but enhancing understanding of the different ways in which benchmarking is implemented in the higher education system.

Quality assurance evaluations: accreditation & academic audit

The literature on quality assurance evaluations focuses mainly on processes for external evaluation—accreditation and academic audit—applied to universities and/or to specific programmes of study (Harvey & Newton, 2004). While there is some overlap between the methods and varied usage of the terms in the literature (Vroeijenstijn, 1995) distinctions can be made on the basis of their generalised purposes and application within a higher education system. Accreditation is essentially a standards-based approach whereby universities or programmes are evaluated against pre-determined criteria in order to ascertain whether or not the criteria are met (Kis 2005; Chalmers et al., 2008). Academic audits use the university's own mission and objectives as the criteria against which internal systems and processes are evaluated (Meade & Woodhouse, 2000). The structures associated with these processes were described earlier in this Chapter and attention is now turned to the procedural aspects with a view to their possible outcomes in universities.

[7] Quality Assurance Agency, http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp, retrieved 23 June, 2010.

Accreditation

The various stages of an accreditation process have been described as:

- submission of an application to an accrediting agency;
- assessment of eligibility by the accrediting agency of a university or programme;
- submission of a documented self-review by the applicant that addresses criteria or standards specified by the accrediting agency;
- peer-review of the submission conducted by representatives of the accrediting agency often including a 'site-visit'; and
- conferral (or not) of an accredited status by the accrediting agency, typically valid for a limited time (e.g., five years) after which the applicant is required to carry out the process again (Department of Education, Science and Training, 2004; Proitz et al., 2004; Stensaker & Harvey, 2006).

The overall process has changed very little in the past 20 years and some authors have observed a strong focus on documented 'inputs' such as written procedures and numerical information (e.g., staff student ratios and staff qualifications) which have tended to overshadow measures of outputs or outcomes which are more difficult to define (Davenport, 2001; Harvey, 2004b; Stensaker & Harvey, 2006). In an attempt to redress this imbalance there has been increasing demand for accreditation agencies to 'add value' to the 'accredited' with the provision of more detailed information regarding areas where processes could be improved (Proitz et al., 2004; Stensaker & Harvey, 2006).

Criticism of accreditation processes has been levelled at the generic application of standards and criteria. Davenport (2001) observed that the standards set reflected the consensus of (often) diverse stakeholder groups. Consequently, standards have tended toward minimum requirements rather than notions of excellence, extension or service to particular communities purported to be part of the higher education mission. Furthermore, although standards change, the procedure for changing standards used in an accreditation framework is necessarily slow to accommodate the need for achieving consensus amongst stakeholders and implementing the changes systematically across those already accredited (Davenport, 2001). A number of authors have also suggested that the use of detailed standards has the potential to threaten the autonomy of universities and undermine their responsiveness to factors operating at a local level (Graham et al., 1995; Vaughn, 2002; AUQA, 2008). The argument proposed is that the (ongoing) bureaucracy associated with an accreditation process when coupled with the need for compliance with standards set externally can sit uncomfortably with the expectations of creativity, innovation and quality improvement that universities are expected to foster (Harvey, 2004b).

Academic Audit

There are similarities and differences between an academic audit process (or 'quality audit' as it is sometimes termed) and the accreditation process discussed previously. Similarities

between the two processes can be observed in the methods used [self-review, peer review, site-visits, and document analyses (Vroeijenstijn, 1995; Dill, 2000; Szanto, 2005)] and in the general approach which comprises:

- pre-determined audit 'criteria' which commonly use a university's own plans and objectives as the 'standards' against which the investigation is carried out;
- a detailed self-review implemented by a university and documented for submission to an audit agency;
- an external evaluation of a university by an audit panel arranged by the audit agency; and
- presentation of a public audit report that captures the findings and recommendations of the audit panel (Szanto, 2005; Shah, Skaines & Miller, 2007; Chalmers et al., 2008; AUQA, 2010).

Differences between the academic audit and accreditation processes arise from their origins. Whereas accreditation operates from a 'standards-based' perspective, academic audit processes are founded in financial accounting where independent review of company financial systems and the subsequent presentation of a public report is common practice (Winch, 1996; Power, 1997). One of the advantages of this approach is that it can be carried out at a university level and managed relatively easily with generalist expertise rather than the discipline specialists required for evaluations of particular programmes or systems (Marginson, 1997; Kis, 2005). One distinction between a financial and an academic audit lies in the developmental approach to quality improvement intended to be an outcome of the latter. An underlying assumption of the academic audit is that improving processes results in improved outcomes (Dill, 2000). Consequently, academic audits have a strong focus on the effectiveness of the processes that contribute to teaching, learning and research (Woodhouse, 1998; Chalmers et al., 2008). For example, an academic audit report could make observations about the deployment of a university's assessment policy by examining the procedures in place to support the policy. The assumption here is that student learning and assessment practice will be improved when the policy is consistently and effectively implemented. However, given the focus on quality assurance activities at a university level, and the generalist expertise of the external audit panel, it is less likely that substantive comment would be made about the adequacy and appropriateness of the policy in relation to the institutional identity, or the literature on assessment practices in higher education. For these reasons the audit process has been criticised as superficial because there is little penetration of the recommendations to teaching, learning and research at academic unit and discipline levels (Meade & Woodhouse, 2000; Kis, 2005; Szanto, 2005). Furthermore, external auditors can lack the detailed contextual knowledge required to propose recommendations that take account of the management structures, culture(s) and power relationships operating within a university (Thune, 1998; Centre for Higher Education, 2007, cited in Chalmers et al., 2008).

Research by Cheng (2007) on the perceived impact of academic audits on the work of academic staff noted that over half of the academic respondents believed the audit had little or no effect on their practice. Cheng also identified other reasons for academic staff dissatisfaction with the academic audit process such as the increasing bureaucracy associated with documenting procedures, gathering evidence and demonstrating conformance to standardised frameworks (2007). The escalating bureaucracy and time required for its maintenance have lead to a suggestion that academic audits are a costly and inefficient way to support improvement in universities (Kis, 2005). A particularly poignant example was provided in a review of external quality evaluations conducted by the Australian Department of Education, Science and Training (2004). They noted that the Teaching Quality Assessments and Subject Reviews conducted in the United Kingdom had direct costs of up to $50 million per annum, expended on the finding that 94% of the assessments received the highest or second to highest grades.

On the positive side, there is evidence to suggest that academic audits have been successful in eliciting a response from universities in the form of auditable methods and measures for teaching quality and research outputs (Stensaker, 2003; Harvey, 2006; Hernard, 2010; Langfeldt, Stensaker, Harvey, Huisman, & Westerheijden, 2010), and attention to the need for systematic planning, implementation, monitoring and review of university operations (Dill, 2000; Meade and Woodhouse, 2000; Cheng, 2007). There is also some agreement that the benefits of an academic audit are primarily associated with the conduct and outcomes of the university's own self-review (Harvey, 2006; Jackson et al., 2006). That said, and despite the widespread application of the academic audit process, there is very little information regarding its actual impact on teaching, learning and research (Carr, Hamilton & Meade, 2005). This could be, as argued by Power (1997), because the very nature of audit is self-reinforcing and tautological. Once engaged with an academic audit process, a university is then committed to an ongoing cycle of independent review and reform that results in changes which then require independent review and reform and so on. Whether or not there is value in the process, refusal to submit to an academic audit could be construed as refusal to allow 'public' scrutiny of a university's internal quality assurance systems. In this respect, the academic audit process could be considered coercive. This aspect is discussed further within the following section: Systems of Knowledge/Power.

Summary

The design, application and outcomes of evaluation processes are the substance of quality assurance and improvement in universities. The previous sections have highlighted some of the differences between 'general' evaluations intended to improve learning and understanding, and evaluations conducted for quality assurance purposes. Commonly applied methods underpinning each form of evaluation have also been described. Reflecting upon the discussion, three main themes emerge. The first theme was observed by Harvey and Newton (2004); that is, quality evaluations *begin* with a specification of the methods to be used, as opposed to a clear statement of purpose followed by the design of an appropriate approach. In other words, where evaluations of teaching, learning and research flexibly take

account of multiple purposes and a range of possible outcomes, quality assurance evaluations tend to be prescriptive and linear with defined outcomes such as an audit report, an accredited status or a rank ordering.

The second theme, again referring to work by Harvey (2002), is the centrality of method and its application in quality assurance evaluations. A strong focus on the development and refinement of accreditation and audit standards, criteria and processes effectively avoids any substantive discussion about the purpose(s) and outcomes of these exercises. In effect, the pursuit of such 'generic approaches' to evaluation can be construed as an attempt to make the process 'value-free' and avoid any consideration of its 'value-laden' nature.

The third theme arises from the perceived importance of independent or 'third-party' assessment that pervades quality assurance evaluations. It is pertinent to note a point made earlier that quality assurance systems have focused primarily on the assessment of teaching and learning due, in part, to the need for 'external scrutiny' of this particular university function. This provides further weight to the argument that the purpose of 'quality assurance' is accountability in the first instance. Furthermore, the expanded use of quality assurance evaluations also provides a means of shifting 'the control of quality' outside universities. In the words of Parker and Jary (1995): "quality becomes a property (or more correctly, a label) bestowed by others, and not one that an individual or professional group can make autonomous decisions about" (p. 325).

The differences between the 'general' and 'quality assurance' approaches to evaluation in higher education are captured in a conceptual framework presented in Figure 8. The Figure depicts the centrality of methods which are shared by both approaches, and the locus of control that divides the ways in which they are applied (assessment of teaching, learning and research versus accreditation and academic audit). In terms of outcomes, Graham et al., (1995) observed the essence of evaluation within a university as being discovery to ascertain what was happening and how it could be improved. They contrasted this with evaluations conducted for quality assurance purposes which were intended to persuade those outside a university that it deserved their support (1995). They also noted that it was important that the divide remain in place, lest the methods and approaches used by external agencies become internalised and divert evaluation activities within a university away from improvement activities (1995).

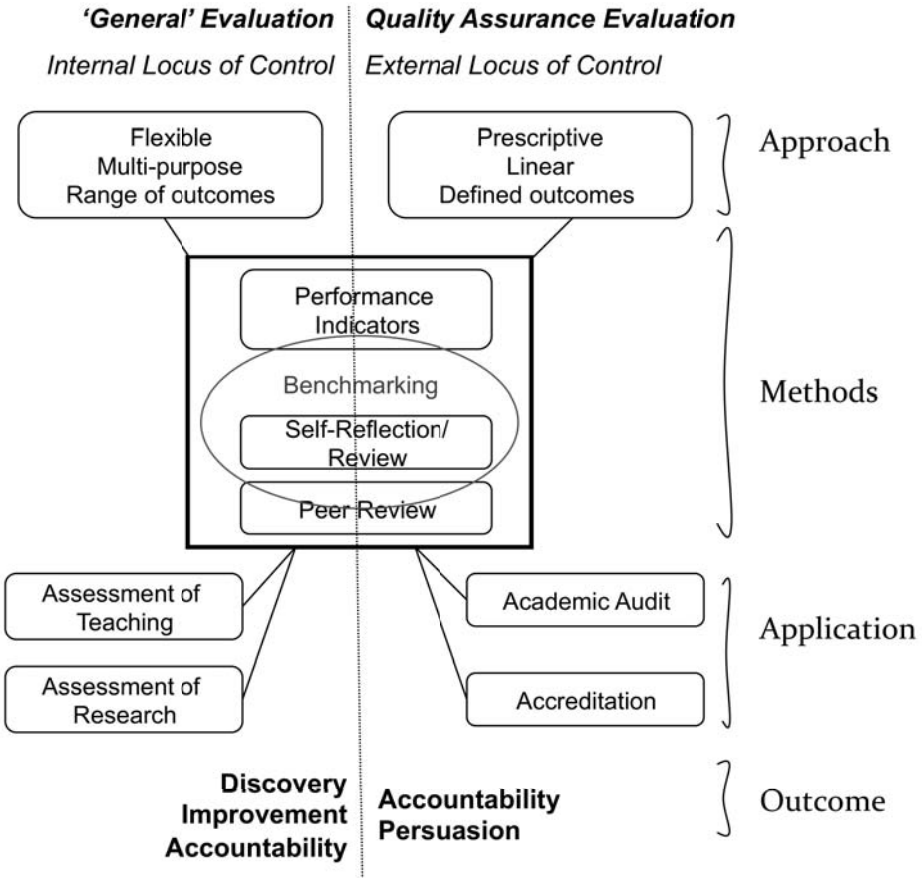

Figure 8: Conceptual framework for evaluation in higher education

In the light of issues associated with quality assurance evaluations it is perhaps not surprising that some universities offer no more than a compliance response to these initiatives in an attempt to protect their institutional autonomy, preserve their reputations and advance the higher education mission in an environment of decreasing funding and increasing workload (Graham et al., 1995; Jackson, 1997a; Stensaker, 2003; Harvey, 2004b). Referring back, once again, to the idea of quality assurance as the methods and measures for internal and external accountability, and quality improvement as a process of critical enquiry that can lead to understanding and improvement of teaching, learning and research, the approach and methods utilised for performance reporting, accreditation and audit work on a 'the lowest common denominator' basis. In short, the generic 'mix' of methods and the standardised frameworks propagated in these evaluations provide little more than a superficial snapshot of a university's operation which is unlikely to penetrate to the areas (academic units and disciplines) where teaching, learning and research are conducted. I propose that whether universities approach quality assurance evaluations as a compliance or quality improvement exercise is actually peripheral to the main issue. What matters is that external quality evaluations do not lend themselves to the flexible and multi-purpose processes of critical enquiry necessary for improving the quality of teaching, learning or research in universities.

SYSTEMS OF KNOWLEDGE/POWER

Systems of knowledge/power provide an opportunity to examine the relationships between different elements of the higher education system with a particular focus on areas where one group is constrained by another in a way that may be contrary to their own interests. Understanding what might be construed as 'valid' knowledge is an important factor in the discussion as it potentially imposes restrictions upon the information and communication flows across different levels of the system.

The links between quality assurance and issues of knowledge/power in higher education have been observed by a number of authors in the quality assurance literature (see for example Brennan & Shah, 2000; Salter & Tapper, 2000; Barnett, 2003; Morley, 2003). At present, quality assurance appears to be synonymous with accountability, and the processes devised by external quality assurance agencies to improve the efficiency (and to a lesser extent the effectiveness) of universities. Policy and regulatory levers determine the meaning and the implementation of 'quality procedures' so in practical terms, quality assurance provides a mechanism for advancing a range of political agendas and increasing the level of control over universities (Graham & Barnett, 1996; Winch, 1996; Jackson, 1997a; Harvey & Newton, 2004; 2005).

Advancement of a 'value for money' agenda is achieved where direct linkages exist between compliance with external quality assurance requirements and funding allocation. The relationship between external quality assurance and the desire of governments to obtain greater financial control of university spending has been described by a number of authors (Harvey & Newton, 2004; Schmidtlein, 2004; Brunetto & Farr-Wharton, 2005; Kenny, 2008). In New Zealand, the link is made explicit in the Education Act (1989, Section 159) where it is stated that the TEC can withdraw or suspend funding for universities if they do not provide information required by the Government, or achieve anticipated outcomes as measured by the performance indicators presented in the university's investment plan negotiated with the TEC.

The prevalence of performance indicators within quality assurance frameworks is an important element of 'making quality auditable' (Power, 1997, p. 60) and advancing the external accountability agenda. Consequently, 'legitimate knowledge' is that which can be externally audited and/or measured numerically with the use of performance measures (Barnett, 1994; O'Neill, 2002). Barnetson and Cutright (2000) observed that the design and implementation of performance indicators could be used to influence academic work as the indicators determined the issues to be addressed as well as defining the evidential parameters for understanding and evaluating those issues. They concluded performance indicators had little to do with the 'quality' of education, but were primarily designed to ensure compliance with government goals (2000). In another example, Marginson (2008) discussed the particular case of indicators used to generate university rankings and the impact they had on institutional identities. He observed that rankings could reduce diversity and undermine the

authority of universities and nations to assert an identity appropriate to local circumstances as opposed to globalised measures of performance. Overall, it has been observed that external quality assurance (accountability) frameworks impede the ability of universities to make autonomous decisions about what should be valued and measured in relation to their own missions (Vidovich & Currie, 2006).

The external auditability/accountability agenda has also had an extensive impact on the systems of structure and process within universities, with significant changes observed to the distribution of power and control. The rationale begins with a premise that compliance with quality assurance frameworks is one of the ways in which the agenda of a particular agency or group can be imposed on another (Brennan & Shah, 2000; Giertz, 2001; Harvey, 2007). This idea has been directly linked with the creation and expansion of quality assurance agencies (often within, or at the behest of government) and their role in determining the rules and procedures for quality assurance in higher education (Fry, 1995; Shore & Wright, 2000; O'Neill, 2002; Kis, 2005). Specifically, compliance with external quality assurance frameworks is assured coercively using changes to university funding, reputation, or status as potential consequences of non-compliance (Becher & Kogan, 1980). This approach is then reinforced via a self-referencing and self-replicating series of quality assurance processes and structures that alter the distribution of power both within and among universities (Power, 1997; Henkel, 2000; Shore & Wright, 2000; Morley, 2003). In the words of Neave (1998):

> *"the ability to modify the rules of the game, and at the same time, to require compliance—or to confer trust—are very real expressions of power... the question of 'ownership' of the intermediary bodies becomes a matter of crucial importance not only because they have the power to define what is to be evaluated and how it is to be evaluated but also because such evaluation affects whether individual universities bargain for resources from a position of strength or from a situation of publicly certified intellectual and moral debility" (p. 278).*

The financial consequences of non-compliance with external 'quality' requirements have been discussed previously with reference to the New Zealand context. The potential for external quality assurance to impact the status and reputation of a university can be observed in relation to programme or university-level accreditations gained (or lost) (Brennan & Shah, 2000). Accreditation bodies occupy a privileged position in the higher education system as 'guardians of standards'. Consequently, their role is not without self-interest and evidence of their impact can be seen in the uniformity of related programme structures within universities (Davenport, 2001; Harvey, 2004b). A study by Mathews (2004) illustrated this point in terms of a high level of conformity within the structure and content of accredited accounting programmes in Australia. The power of accreditation can also be wielded both ways. Several authors have observed the pursuit of programme-level accreditations by disciplines and academic units as a means to strengthen a university's commitment to their area and justify the injection of additional resources (Brennan & Shah, 2000; Harvey, 2004b; Lemaitre, 2004).

Compliance with external quality assurance requirements based upon the potential for financial and reputational loss or gain has a cascade effect throughout the system. The need for a coordinated response to external demands necessitates the introduction of university-level systems of structure [or "management control systems" as Power calls them (1997, p. 40)] which then require additional personnel for their coordination and management (Graham & Barnett, 1996; Brennan & Shah, 2000; Salter & Tapper, 2000; Morley, 2003). In this regard, external quality assurance frameworks are self-replicating and widely recognised as part of the growing managerialism within universities where the distribution of power has 'shifted' from the academic unit to the 'centre' (Brennan & Shah, 2000; Salter & Tapper, 2000; Scott, 2002; Lock & Lorenz, 2007). Salter & Tapper (2000) observed that these changes have met with little resistance from the 'management' within universities who can utilise the processes to expand their influence and authority.

The cascade effect is further extended to the processes that operate in universities. The requirements for 'auditability' and numerical performance measurement accompanying the application of quality assurance have changed the nature of 'evaluation' in the system such that value is placed on the ability to document, assess and measure performance in a manner that compares favourably with externally imposed rules and procedures. Existing methods of self-regulation (e.g., peer-review and self-reflection) have been appropriated within the new accountability structures and re-shaped to 'fit' with the requirements for external review and measurability (Jackson, 1997a; Power, 1997; Henkel, 2000; Codd, 2006). This has an impact on the roles and functions of academic staff and disciplines in terms of overwriting their professional values and judgements with those associated with quality assurance processes (Willmott, 1995; Graham & Barnett, 1996; Sullivan, 1997; Morley, 2003). The potential influence this has on the research process was discussed earlier in the present Chapter, including changes to publication patterns and the selection of research projects more likely to produce 'publishable' results in the short term. The influence on teaching and learning is potentially more damaging as those processes suffer from the inability to establish agreed and consistent measures of effectiveness. In other words, any process that requires the conveyance of more qualitative and contextual aspects is likely to be marginalised in an environment where standardised reporting, consistent frameworks and comparative information are valued (Smyth, 1989; Power, 1997; Jackson, 1998; Barnetson & Cutright, 2000).

There are two mediating discourses that potentially soften the blows delivered by the value for money and external accountability agendas. The first is the inclusion of an 'improvement' focus that surrounds the agendas in a discourse of 'improved service provision' (O'Neill, 2002; Morley, 2003). A question remains, however, in regard to how 'improvement' is defined in this context. At present it would appear that improvement is only defined where it can be measured numerically and externally audited. The second mediating discourse arises from the 'democratic flavour' that accompanies external accountability. External quality assurance frameworks encourage attention to the needs of

'stakeholders' and provide for particular groups to have a greater influence on university operations (Power, 1997; O'Neill, 2002; Morley, 2003). However, the extent to which this has been achieved is questionable given the findings that students (and to some extent academic staff) tend to be positioned as the passive recipients of the accountability information generated from external quality assurance rather than active participants engaged in system design and implementation (Salter & Tapper, 2000; Morley, 2003; Skelton, 2005).

The discussion regarding systems of knowledge/power associated with 'quality' in higher education has centred primarily on the impact of external quality evaluation and flow on effect this has had for systems of meaning, structure and process. The discussion suggests that quality assurance is a thinly disguised mechanism for control, forming the basis of power for agencies external to a university, and individuals or groups at the university level. In this regard, 'quality assurance and improvement' in higher education has advanced little further than the manufacturing based forms of quality control described in Chapter 2. However, instead of statistical process control techniques and inspectors there are quality assurance frameworks and 'quality auditors' with their associated procedures and performance indicators. Power (1997) described this as "formalised rituals of accounting and verification" (p. 138) and argued for what O'Neill (2002) termed "intelligent accountability" which required "more attention to good governance and fewer fantasies about total control".

The 'good governance' that O'Neill (2002) alluded to would require the kinds of contextualised and multi-method analyses that can form the foundation of evaluation for understanding and improving teaching, learning and research in universities. Unfortunately, such approaches are increasing undermined by a quality assurance system that rewards compliance with superficial measures. Kerr (1975) called this "the folly of rewarding A while hoping for B". Armson (2008) described it in terms of "target-driven organisational cultures [that] reinforce first-order learning (by rewarding 'quick wins') and make it harder to engage in second order learning that involves challenging the targets" (p. 4). The question is whether the entrenched systems of knowledge/power that accompany quality assurance frameworks can be challenged and changed to foster discovery, understanding and improvement, or whether they will continue as is, ever expanding the requirements for accountability.

Application of Systems Tools to the Quality Assurance Literature

Alternative views of the literature on quality assurance in higher education are made possible with the application of systems tools. As observed in Chapter 4, metaphor analysis and systems windows provide a means for creative thinking about the literature base as a whole, especially the extent to which particular areas or issues have been investigated.

Metaphor analysis

Applying the procedures described in Chapter 3, each of the 170 publications and articles regarding quality assurance in higher education were classified according to the metaphors perceived to underpin the text. The results are shown in Table 19.

Table 19: Metaphors Observed in Publications on Quality Assurance in Higher Education

Metaphor	Number and proportion of publications in which the metaphor was observed	
Political	137	81%
Culture	111	65%
Machine	82	48%
Brain	66	39%
Organism	46	27%
Coalition	35	21%
Domination	28	17%
Psychic Prison	13	8%
Flux and Transformation	5	3%

The political metaphor dominates the discussion of quality assurance in higher education and reflects the nature of quality assurance as a primary focus of competing interests within the system. The distribution of the remaining metaphors provides insight into these competing interests. For example, the relative frequency of the 'culture' metaphor draws attention to quality and its interaction with the shared beliefs and values of those in universities. These interactions can take a coercive or controlling form in some instances as highlighted by the appearance of the 'coalition' and 'domination' metaphors within the literature. The association of quality assurance with regulatory frameworks, rules and procedures also gives rise to the mechanistic flavour that pervades almost half of the publications reviewed.

The idea of quality assurance as providing a basis for gathering and processing information toward learning and improvement is relatively common within the literature and this is shown in the occurrences of the 'brain' metaphor. As described in Chapter 3, the brain and organism metaphors share a view of organisations as semi-autonomous and interdependent sub-systems. The difference between the frequency of references for the two metaphors suggests there could be some disconnection between the gathering and processing of information and the use of that information within and across sub-systems. In other words,

the quality assurance system could have a tendency to gather information for its own sake, rather than for the purposes of learning and improvement. In short, there is a possibility that the means has become an end in itself.

Finally, there were very few occurrences of the flux and transformation and psychic prison metaphors within the quality assurance literature. This suggests very few authors discuss quality assurance as a dynamic, flexible or innovative approach. Neither does it appear to be an approach discussed as restricting the behaviour or ideals of those within the system. This is a curious finding considering the coercive nature of quality assurance reflected in the frequency of the other metaphors. It could be that the participants perceive quality assurance to be in a 'stable state' outside, and unrelated to, their everyday work and experience. If this is the case, then the politics, culture, mechanisms and potential learning associated with quality assurance tend to be played out in particular levels of the system, as opposed to influencing the system as a whole.

Systems windows

Table 20 presents the number and proportion of publications that explored the systems of process, structure, meaning and knowledge/power in the quality assurance literature reviewed for the present study.

Table 20: Systems Windows Observed in Publications on Quality Assurance in Higher Education

Window	Number and proportion of publications in which the window was observed	
Process	147	87%
Structure	120	71%
Meaning	77	45%
Knowledge/Power	40	24%

The Table shows that the literature focused mainly on quality assurance processes and structures with some attention given to the meanings of quality assurance and significantly fewer publications examining issues of knowledge/power. This reflects the dominance of quality assurance as a process-oriented, controlled, and coordinated set of practices being implemented uncritically, without giving careful consideration to the underpinning values or the impact on elements within the higher education system. This observation also corroborates the suggestion made above in the metaphor analysis that the means of quality assurance may be an end in itself.

Part II: A localised perspective based on the case study findings

The following section presents a 'descriptive story' of quality assurance and improvement in the New Zealand context based on the images and perspectives of academic staff, middle managers, senior managers and representatives of the central authority. The story has been woven from participant responses to interview questions (Chapter 3, pp. 29-30) with direct quotations used to preserve the integrity of their voices. Key findings are noted in bold text as they emerge within the story. These findings are then discussed in the section summary with reference to issues identified in Part I of the Chapter.

ACADEMIC STAFF

…ON QUALITY ASSURANCE

The images of quality assurance presented by the academic staff were generally positive in relation to localised and internal processes, and negative regarding processes and tools imposed externally. This was particularly evident during discussions about various quality assurance activities. Negative imagery was most likely to be associated with external forms of quality assurance such as audits, accreditation, and the quality assurance bureaucracy of 'nuisance work', 'paperwork' and 'tick box' reporting.

> *A4: "It's the carrot and stick thing… setting standards or requirements, setting policy and audits… and that sort of thing is important because you have to get people to do things but members of staff have to see it as not being an imposition – another form to fill out for the centre… there's a lot of demands for reporting"*

> *A2: "images of bureaucracy basically, and formalisation… to me there's so much about quality in universities that is intangible and you can't mark it on a 1-10 checklist… I have an initial bad response to that sort of word but I'm increasingly realising that it's necessary and can be positive"*

> *A10: "[quality assurance is] what you do to try and keep and improve quality, and the bureaucratic processes which get in the way of doing stuff… we have a fairly positive view of quality assurance processes – as long as they're designed to be as non-bureaucratic as possible"*

Participants were prompted to discuss two specific external quality assurance processes: academic audit and accreditation by CUAP. Of the nine academic staff who spoke about academic audits, seven were unclear about their impact or believed they had no impact on the quality of teaching and research. However, four of the participants were positive about the importance of the internal self-review that preceded an academic audit.

> *A3: "[audit] it's a necessary political response to circumstances [though there may be] momentum out of preparatory work"*

In relation to the impact of the external programme accreditation administered by CUAP, five of the nine respondents perceived the internal processes to be robust, and the external

elements as unable to ensure 'good quality' because this was always determined at a local level by the people responsible for programme delivery.

> *A10: "CUAP is about the quality of the overall programme which should be the right kind of shape and standard… CUAP is important, it prevents some really bad programmes as it forces people to at least think a bit… it doesn't ensure quality, it prevents some kinds of lack of quality… the real protection for quality is in the discipline groups – if you have enough people in each discipline who want to protect the reputation and the standards of their discipline, who are aware of what is going on overseas and care about it, then they will work to make sure it's OK… regular reviews can help – they force people to look at it and be able to defend it… therefore the critical thing is choosing people who will care and enabling them to keep caring"*

> *A3: "[CUAP] only looks at the proposal and not much follow up in terms of whether the proposal matches the reality. At University level, it does feed down and they look fairly stringently at assessment and teaching delivery methods. I'm not sure it's doing anything to improve the top end, it's ensuring that the bottom end keeps with minimum standards"*

Localised and 'internal' processes discussed by the academic staff included strategic planning and benchmarking. Strategic planning was an initiative that received positive endorsement from six of eight academic respondents who agreed that it helped to 'set focus' and assist with resource deployment.

> *A10: "if you don't have a strategic plan you can't make the hard decisions about where resources go… but it needs to be done well and it needs to indicate what you can't do as well as what you can…"*

Over half of the academics' responses regarding the impact of benchmarking on quality related positive perceptions of internal initiatives, including the evaluation of programmes using peers from other universities. Externally driven and University-level benchmarking prompted negative responses around the use of league tables and neglect of the institutional context.

> *A1: "I like benchmarking that is soft and qualitative… just by talking to another organisation about how it does things and its ethos, you can actually learn a lot".*

There is a clear divide between the acceptance by academics of internal initiatives for the assurance of quality and activities driven by external demands or requirements. Internal assurance of evaluations and standards are perceived to be positive forms of quality assurance that provide needed checks and balances. Externally driven quality assurance is perceived to be bureaucratic and unrelated to the improvement of teaching and research.

Questions about the nature of evaluation in relation to quality assurance, and who should appropriately make judgements about 'quality' were a theme common to academics' responses. Academics' perceptions of quality were dominated by what was measured and the partiality of the measures used. Pre-occupation with measurement towards 'accountability and standards' was perceived to be in conflict with quality assurance towards 'improving quality' and this was a theme common to a majority of the responses. Three of the comments suggested that University-level initiatives had actually undermined quality as a local (departmental) concern.

> *A6: "monitoring quality… my worry is that the very act of trying to manage and measure quality can limit your chances of achieving it… I have the impression that we've created this edifice that's trying to measure and learn but that really does stamp out the things that create true quality… I think you get "OK" across the system"*

Three of the academics explained how current quality 'measures' had been externally imposed on top of existing mechanisms for the peer review of teaching and research. In particular, the use of performance indicators was discussed with little enthusiasm by over half of the academic respondents who noted that they could have an impact, but were not sophisticated enough to explore the complexity of the teaching and research environment. Performance indicators were generally thought to be punitive in nature, restricted to easily measurable activities and focused on the achievement of minimum standards.

> *A3: "it concerns me that by laying down stringent sorts of procedures and safeguards, that essentially you're undermining a presumed professionalism for staff involved… you have to trust people… you can set down some minimum standards but if you over constrain what people are expected to do you're definitely going to undermine their ability to do something outstanding at the very top level... Essential measures of our quality come through peer recognition… not through bureaucratic or administratively imposed procedures… we're bringing human values in when we assess the worth of what we do"*

> *A10: [on performance indicators] "they're like our grades, they're not measuring what we really care about but we hope they're reasonable indicators… how can management decisions be made without them? They're just indicators, they're not measuring the real thing because you can't"*

It was interesting to note that only one of the respondents positioned quality assurance with individual academic staff stating that anyone could evaluate 'process' but only academics could evaluate certain things, such as the quality of student work.

> *A4: "[on images of quality assurance] someone independently, without any vested interest, giving their frank and informed assessment of something… at the end of the day, academic quality assurance has some degree of independence from other motives. So academics must have a degree of independence even if*

they're not a specialist in a certain area, they can read a grant proposal or a research proposal and say 'this makes sense', or 'this is the worst proposal I've ever seen'. You can still make informed assessments even across different fields. That independence is what academic quality control is about. Assessing a thesis, the quality control is someone at [another university] sending me a letter in two weeks time saying we haven't seen your examiners report yet is it still coming? That's one type of quality assurance - processes put in place to track examiners reports and make sure that they have two external examiner reports and one internal one and if there's a dispute between them there's a process in place to deal with that. But the real work that's being done is by the three examiners – there's quality assurance – and some academic or dean may be adjudicating differences in opinion or assessment between those three examiners in order to determine the final grade for that thesis. That's another academic quality assurance process"

Not only do academics perceive externally driven or imposed quality assurance processes to be divorced from the improvement of teaching, learning and research, they believe the strong focus on measurement undermines the development and implementation of local and internal quality assurance initiatives.

All of the respondents observed that existing methods of evaluation for teaching and research were insufficient and offered only a partial representation of 'quality' at the University. Many of the participants stressed the requirement for multiple measures including self-reflection, ongoing dialogue and the existing mechanisms for peer review. Information mentioned as necessary for making judgements about quality included: formal student surveys; anecdotal feedback from students; feedback from employers; understanding of disciplinary differences; contextual elements (such as the number of students participating in part-time or full-time work); curriculum coherence; and recognition of the time needed to evaluate the graduate and research outcomes.

A8: "The things I think make real quality are the things that don't fit into a framework – like supporting inspiration, prodding people beyond their comfort zones, getting people to give more than they realised they had in them"

A2: "there's enough anecdotal evidence to suggest there are areas where things could drastically improve… you hear stories about what other people are doing and students tell you what other people are doing… obviously when you've got PBRF you've got some kind of control over research… there's a lot of dissatisfaction but at least it's some way of assessing that [research]… so far there's been no way of assessing teaching"

A6: "it's the anecdotal feedback that tells you you're on track… numbers are always helpful but it's the words of someone talking to me… it's like the articles you've written that go for review, you get feedback and when they do get published you can be reasonably confident as to their quality but its not a numbers game"

A10: "in terms of teaching [quality] – I can see it in my students when they work on projects, I can see if they understand the stuff… I can see the quality better in the informal interactions… assessments are a reliable (repeatable) measure but

they're not a measure of exactly what we would most like to be able to measure… How would I really measure the quality of our students? I'd ask the people who employ them"

Existing 'measures' of quality are too partial – academics' believe that multiple measures, quantitative and qualitative, formal and informal, and derived from multiple sources are required to make informed judgements about quality.

The PBRF—as a specific mechanism for the evaluation of research—was a matter discussed by the academic staff without prompting. Four respondents explicitly mentioned PBRF as an impediment to the maintenance of teaching quality and this was a theme that was also discussed in response to the question regarding the impact of PBRF. Strong views were expressed about the PBRF: none of the academics reported that PBRF would have a positive impact on the quality of research, but three noted that it would increase the numbers of research outputs. Four academics suggested that PBRF would undermine the 'collective effort' and three others emphatically stated that it would have a negative impact on teaching quality.

A2: "I think people are deciding they have to publish more, whether the quality is better, that's debatable… and it could have an effect on teaching with people realising they have to put more time into research, they will put less into teaching"

A10: "the danger is the emphasis on PBRF and research discourages people from caring about teaching"

The costs and benefits of PBRF were discussed by two of the academics who agreed that the former outweighed the latter. Two staff noted the 'high stakes' nature of the system which provided a 'financial stick' over the institution and leveraged off the individual reputation and status of academic staff. Two academics stated that the impact of PBRF would be felt more by academic staff perceived to fall in the 'middle' of the research/teaching continuum: their focus would be directed away from teaching and toward research.

A1: "I don't like political agendas driving evaluation and quality assurance… if you set the stakes too high you destroy cultural commitment"

A6: "when you look at the effort and attention and resource that is put into it you have to wonder whether the outcomes are worth the effort"

A8: "[PBRF exists to] make sure the money goes where the most research is done… you don't need to track everyone individually and see whether they're pulling their weight – they may be pulling their weight doing something completely different… it is totally unnecessary – the information required was already there"

The comment immediately above from respondent A8 highlighted a tension between PBRF as a process based on individual assessment, and 'quality' as an emergent property arising from the 'collective' responsibilities of University staff.

> *A6: "quality happens collectively, it's not individually based, it's the admin staff clicking with the academics, its everyone clicking on particular projects and working together… I don't quite know how you measure that or see it, but you can feel it"*

> *A4: "The normal incentives for people to work solidly and steadily are promotions, and now PBRF becomes part of that – particularly in terms of one's standing against one's peers… institutional status and peer esteem is one of the primary motivations for academics to burn the midnight oil and get things out… so it has all the elements of a good motivator but the drawbacks… academics are working in isolation, teaching courses, doing their own research, but you're actually a member of a department or programme team. Within that collective there's a division of labour, all the things that have to be done are done as a team, so things should be measured as a group"*

> *A5: "[PBRF] has profiled the importance of research and it's added to competition so the teaching which is, by legislation, our core activity is being seen to be marginalised… research-led learning and teaching has been a way to bring the two poles together in an environment imposed by government quality assurance mechanisms… if they don't follow through with equal effective mechanisms for assessing teaching quality and remunerating that appropriately we're going to see a ghettoisation of teaching that will be in constant conflict with the research mandate"*

It was interesting to note that in response to questions regarding the main quality issues at the University, nine of the 10 academic staff discussed teaching and teaching evaluation. This aspect is particularly evident in the response of A5 above. The main impediments to the improvement of 'teaching quality' were perceived to be lack of time for reflection and discussion regarding effective teaching (especially for a more heterogeneous body of learners) because of pressure to produce more individual research.

'Partial' measures of 'quality'—whether in relation to teaching or research—disturb the roles and responsibilities of individuals and groups within the University and effect the importance placed on particular activities.

…ON QUALITY IMPROVEMENT

A majority of the academics discussed the tension between external drivers for 'quality' ('enforced accountability', 'compliance focus') with achievement of 'quality improvement'. All the academic respondents believed that the University did have a culture of improvement with some caveats. Four believed that it was a recent development in the past five to ten years, and seven staff observed that a focus on improvement was an innate feature of individual academics who were reported as being highly committed and self-motivated.

A6: "most of the things we do are about trying to be better… it's about incremental improvement rather than radical change"

A1: "the academic community is very focused on quality improvement… all my friends in the University are exhausted and care so much and I also think that the University administration also cares but the dialogue is going past each other, we're not finding the right focus, or the right language or the right space somewhere to talk to each other about these concerns"

A10: "we strive for quality, we're constantly working out ways to try and improve the quality of education – without having a really well-defined idea of what it is…I don't think that matters"

A5: "there are glimmers here… it's percolating down through various initiatives but it's not pan-University and it hasn't come down as a directive of improvement"

Academic staff do not associate quality assurance with a focus on improvement. Whereas quality assurance are the procedures and requirements imposed from other levels of the university system, quality improvement is a local pursuit based on a desire to 'do better'.

MIDDLE MANAGERS

… ON QUALITY ASSURANCE

Middle managers were more likely to present negative images of quality assurance than academic staff: 'paperwork that goes nowhere' was a common theme in a majority the responses. The link between quality assurance and 'formality' ('plans and compliance', 'formal processes', 'top down policies') was also dominant and only two of the respondents linked quality assurance with perceived useful processes such as being better able to monitor existing practices and the management of risk 'when things go wrong'.

M1: "[images of quality assurance] Quality improvement plans. Quality improvement cycles. And quite often a lot of the paperwork that sits in offices and goes nowhere to be truthful"

M6: [images of quality assurance] "Probably forms! Well, it has to do with policies and dissemination of policies, implementation and monitoring of policies, or just collection of data on what's going on, what current practices are, closing the loop on various things too"

M4: "I think it's always treading a fine line, it's optimising rather than maximising the bureaucracy, balancing not managing enough with managing too much and being too hands on. Its having enough processes in place that for most students it's supportive of what they're trying to do without distracting them too much with form filling-out and box ticking and things like that… Quality assurance is about making sure that records are appropriately kept and providing layers that people can go through if they have a problem"

The contrast between perceptions of internal quality assurance and initiatives driven externally was evident in discussions regarding quality assurance mechanisms. In a similar vein to the responses of academic staff, three of the seven middle managers were unclear about the impact of academic audit and two believed it had no impact at 'ground level'. However, four of the middle managers noted the importance and constructive outcomes of the University's self-review. Specific comments in relation to the impact of academic audits are provided below.

> *M2: "It hasn't had any impact that I know of, they didn't want to talk to me, so I just had to produce stuff"*
>
> *M6: "Not at the ground level. I don't think most staff either cared about it or knew what was going on. Maybe that's unfair"*
>
> *M5: "No I don't think they do have an effect. Not in our School. Our experience of academic audits so far, is that yes, they produce a report and the report gets shelved and that's all that happens"*
>
> *M1: "From where I'm sitting I haven't seen any difference to what is happening here, but I am aware from Academic Board that some of the processes will be changed and we will be looking at different policies so at that higher level there will be an impact on what happens"*
>
> *M3: "Yes I think they've had an impact – I've only been conscious of two and I found them a good process and like all processes of accounting for yourself it makes you think about what you do and sharpen your act up, makes you self-assess which is good, and you get external comment on what you do. It doesn't mean to say you have to agree with it or listen to it or act on it but it's just a useful thought-provoking process. I feel quite comfortable with it and I think they do have positive effects"*
>
> *M4: "Academics hate any type of audit… They're incredibly time consuming and I'm always concerned about time pressures and we have audits and reviews so often of various parts and again, the most useful part is often the process of putting the material together"*

In relation to the accreditation functions operated by CUAP, comments from four of the respondents noted the robustness of internal procedures in contrast to those operated externally which were observed to be 'just a rubber stamp'. Three middle managers discussed the need for greater attention to 'follow-up' subsequent to approval by CUAP because 'things change in the delivery'. The following extracts are examples of the comments of middle managers regarding the impact of the CUAP process.

> *M7: "On the quality? Not much. They're one of those well-intentioned bureaucracies"*
>
> *M4: "I sometimes think the whole CUAP thing is a bit of a farce. Usually it's pretty much determined once it's got that far. We have very detailed, perhaps overly pedantic, academic statutes and they're incredibly thorough so our proposals are in pretty good shape before they get anywhere near CUAP… in a*

way they're important for showing some sort of coordination across the universities but most of the universities have pretty strong internal processes, and it's very difficult to tell sometimes, from the proposals, what the quality of the programme will be like. It depends so much on the staff"

M6: "Actually what I really wonder, what maybe makes it totally useless is that I don't know whether there's any monitoring or subsequent follow-up on whether anyone abides to what they put in the proposals. Does anyone ever check? I doubt it! We do have reviews of programmes but I don't think they'd ever look at initial proposals, in that sense the course proposals are window-dressing, I doubt whether anyone goes back and looks at whether they really did what they said they were going to do"

Each middle manager was positive about the impact of strategic planning especially for medium-term planning. The comments of the respondents emphasised the planning process as important for developing a shared vision and creating a sense of ownership of the outcome.

M2: " I am a fan of strategic planning – at least in the sense of trying to think 3-5 years on, where do we want to be, what do we want to be doing, what are the risks we'll be encountering, what are the threats, where are the opportunities"

M5: "We're in the middle of producing a new strategic plan right now… I consider it to be critically important… It's important for developing a shared vision with the staff"

M7: "The strategic plan isn't the goal, the goal is to get staff to buy into strategic ideas and directions and you'll never achieve your strategic plan – that's not the point of it. The point of it is to try and get the ship moving in one direction"

Six middle managers discussed benchmarking in terms of external examining, programme, or disciplinary reviews, and the regular use of external peers for these purposes. While these were described as useful 'informal' benchmarking, the idea of league tables and ranking was mentioned by two of the respondents in the context of the 'competitive' model in which universities were operating. Overall, the respondents were positive about the impact of benchmarking although two specifically drew attention to the need to take account of the discipline and context in which benchmarking is carried out.

M2: "Anytime you get someone to come in and question the way you do things it's all right. Even if they just say yes you're up to standard it's worthwhile. I don't always think of that as benchmarking because a benchmark to me is a certain level - are you achieving that level or not and most of our reviews are more about what are your strengths and weaknesses rather than some kind of line in the sand and you pass or fail"

M6: "I suppose it depends what is included under benchmarking. If you mean looking at best practice within a discipline, or if you're talking about external examining then yes"

M5: "It's not formalised, we do it somewhat informally through contacts and those with whom we share academic interests. The quality issue is definitely there, we want to look at what they're doing and they want to look at what we're doing and we compare and contrast and they assess, we assess, all informally"

M4: "It's done from a 'who's beating us and how can we beat them' (from a PBRF point of view particularly), and it's also done from a 'what can we learn, how can we improve', but it's totally informal"

Middle managers were also prompted to discuss 'risk management' as one of the processes associated more generally with 'quality assurance'. Of the seven middle managers who discussed the impact of risk management on quality at the University, four related it specifically to financial management, two to the impact of new policies, and two to student management and services. Two middle managers saw risk management as being only 'high level' and not having an impact on quality at the academic unit level. Another middle manager suggested that risk management was undertaken regularly even when it was not formally recognised as such.

M6: "I often get the feeling that a lot of the stuff I'm doing is risk management, damage control or avoidance behaviour as much as it is to a positive benefit. Sometimes they can be both, sometimes the best way to be efficient and monitor stuff also covers you. So they're not mutually exclusive but there is a tendency to do things to prevent trouble"

M3: "I know it goes on, and obviously at senior management level its utterly critical because you're looking at big strategic things. I think that in terms of putting forward a proposal, we don't sit down and say lets do some risk management and go through the risk. We do it by saying 'what happens if' and that's what risk management essentially is. It's interesting these terms isn't it? They're so hated by the University community yet a lot of what they represent is there in some form. So I think we do do risk management, and some places do it better than others but I think it's a live issue"

Internal initiatives associated with planning and review are perceived positively by middle managers when they are related to the context in which the academic unit and its staff are operating. External audit and accreditation processes are perceived to have little impact or relevance to the improvement of departmental functions with the exception of adding to the workload.

… ON 'QUALITY'

Middle manager definitions of quality were mainly associated with the teaching functions of the University. A majority of the respondents discussed quality in relation to student learning and achievement: 'providing the best education to students', 'ensuring the achievement of graduate outcomes', 'providing learning opportunities and facilitating their uptake'.

M7: "… a quality course is delivered in a way that is attractive to students, that leads to high levels of retention for students within programmes and it prepares them to take the next step in whatever career or professional pathway they imagine for themselves"

M4: "Quality in general is making sure that we're providing the best experience, the best education, the best resources to the students and to staff to enable them to do their job. How you measure 'best' is a changing territory. So that's the general ethos and on the whole most academics and most managers in universities are committed to that"

When asked about how 'quality' could be improved in the University, four of the six middle managers discussed the improvement of teaching. Understanding and evaluating quality teaching in a context characterised by a diverse student intake and new technologies were among the points raised. One of the respondents noted that there was a need for more systemic thinking across the University in terms of sharing effective practices and considering the impact of initiatives. Only one of the respondents mentioned research in the context of improving quality and that was to note that clear definitions and goals already existed.

M3: "So one of the challenges for a tertiary institution where most of the lecturers aren't trained as teachers is to maintain that enquiry into how we improve our teaching in a changing context, changing students (mix of international and domestic), changing technology (how we keep up to the mark on that), and how we continue to monitor the effect of what we're doing"

M2: "As Head of School, obviously because of promotions I have to worry about individual quality but we also have to look at curriculum quality. Is the programme meaningful? Does it hang together? There's always tension between does it meet students perceived needs and what staff want to teach"

Challenges to the maintenance of quality were specifically noted in the context of balancing the teaching function with the demands of research, resourcing and monitoring. Conflict was evident in the contrasted images presented: 'doing more with less', ' PBRF pressures conflict with staff development', 'aging and inexperienced staff', 'streamlining administration, getting good information and providing appropriate supports'. Five of the seven respondents specifically mentioned resourcing which was perceived to be inadequately matched to the multiple demands. Two respondents noted the systemic nature of quality as an outcome of 'collective effort' which explicitly included the student service functions of the University.

M2: "Quality is not just about a lecture or a course, it's about the whole curriculum and the whole programme and how, in the end, there's time for research too"

M4: "Another challenge for our Faculty is that we often have a lot of staff who are doing PhDs as well so we have all these conflicting pressures on staff, especially with PBRF now, to increase completions, increase this and that, on top

of what they're always doing anyway. So it's do more in the same amount of time and still maintain quality"

M7: "I think that the babble is always to sustain or improve quality in the face of a declining income and higher demands and expectations from students and ever-increasing competition… Income and resources are not going up, they're actually going down, nonetheless we have to meet these rising expectations"

Middle managers position quality primarily in relation to the teaching function and explicitly recognise the influence of multiple contributing factors including resourcing, services, curriculum, staff and students.

…ON EVALUATION

The difficulty of measuring quality was noted by over half of the middle managers because of its 'variable nature', the 'changing measures' applied, and the need to balance quantitative and qualitative information when making judgements about quality. The use of 'proxy' measures for teaching and learning were discussed, including peer review of content, assessment procedures and feedback and the use of student evaluations. All of the managers noted the importance of formal student evaluation surveys, but only in the context of other information such as peer feedback, curriculum coherence, disciplinary context, subjective judgments based on direct observation, informal discussions and course retention and completions information. One of the respondents explicitly mentioned the difficulty of assessing student learning due to the time lags and complexity of the learning process.

M2: "…if you look at our quality processes most of them are really about time to make sure that we've done everything that we can to facilitate the student learning. Not actually asking if the students have learned with quality – which you can't really. Unless they all had to take some kind of comprehensive test when they all came in and applied the test on the way out to see what the difference was. So we have processes to make sure that they know what their assessment is going to be for a course and try to have open and transparent processes so basically the students know what is going on"

M6: "In terms of teaching, I suppose there are different levels. If we were talking about how we monitor our quality, obviously student evaluations are part of the package. Peer evaluations are probably at least as important because sometimes certain lecturers may not be as popular as such – may not have the show skills – but the actual content may be a lot better than some of the ones who are getting higher evaluations. But obviously it's part of a package deal. If you were going to try to measure quality, it would be in terms of evaluations—student and peer—it might be teaching awards and so on"

M2: "Obviously the tool the University over relies on in my opinion are student questionnaires. There are other measures like if you have a discipline and for years there's been 40 people at 2nd year and 10 at 3rd and suddenly somebody comes along and there's still 40 at 2nd year but there's 25 in their 3rd year course. Something is happening here that's positive"

Middle managers identify the evaluation of teaching as a function that occurs at department level, and that the determination of 'quality teaching' requires information from multiple methods and sources.

Four of the six respondents discussed research quality and the PBRF was explicitly mentioned in two responses as *the* measure of research quality. However, the quality of research as 'valued by the broader international community of scholars' was also noted in terms of the impact that 'quality' research had on established academic networks. The time taken for research to have an impact was observed by one of the respondents to hinder the assessment of research quality.

> *M2: "If you're looking at research some measures of quality are immediately obvious: if somebody publishes in one of the top journals, the world generally assumes it's quality work… The real test often times with research comes 5 or 10 years later when you look to see whether anybody's actually read the work and used it, the citations or patterns etc. So on the research side the quality is probably very hard to judge at the time it's done"*

> *M3: "Challenges in research area – particularly in the PBRF context the quality of research has been defined for us, the more international publications you have and the more reputable the publishers, the greater the peer esteem of what you do and the more money you get…"*

The overall impact of PBRF was perceived by middle managers to cement the focus on research and increase outputs and performance to the stated criteria. One participant noted that PBRF would restrict some of the choices made by academic staff in that they would be more likely to choose projects that would yield outputs in the short-term. Another middle manager noted that PBRF would influence recruitment decisions and there would be a greater focus on recruiting 'top researchers'.

> *M3: "Anecdotally you can see people doing things that would give them a better PBRF rating and I'm sure it's happening with individuals"*

> *M4: "For people who aren't ever going to be researchers, it means the University now has a reason to try and manage them differently. We haven't really been very creative about how we might manage the people who haven't done very well for us in the PBRF. So from a quality point of view I don't know whether it's made a difference at the top end, it's probably made a difference in the middle."*

> *M2: "you've got three classes of academics: the self-motivated ones, they're going to publish as much as they can no matter what, they did it before PBRF for lots of reasons – they want promotion, they want grants so they can travel, they like the international reputation, they love their research and they want to share it. Then there's the middle group who most certainly have increased their publications as a result of PBRF, they're the people who have a slightly more balanced view of their role in the University, they might suddenly in one year put a lot of time into redeveloping a course and if it means that they don't publish or*

turn out fewer publications it doesn't worry them, or if they get asked to chair a taskforce that will wipe out 6 months of their life they'll say 'yeah, I'll do it'. A lot of those people are now thinking – I've got to publish – and they're making judgements when they're asked to do something else. My personal belief is that we're losing the balance there. Then you've got the people who just aren't going to publish, they'll publish occasionally but nothing is going to motivate them. It's a career to them, they know they should publish and if it doesn't get in the way of the things they want to do they'll get the odd article out and it doesn't worry them if they're a C or even and R in the PBRF. So things like the PBRF really impact us"

Middle managers do not perceive the evaluation of research as a departmental function: this is positioned outside of the department within disciplinary communities and as part of the PBRF process.

In relation to the role of performance indicators, middle managers were divided in their views. Three of the managers believed that they could have an impact on quality but this was very much dependent on how the indicators were defined and applied. Indicators were perceived as being useful when they looked at performance over time and were qualitative in nature. Three other middle managers perceived performance indicators to be too 'high level' with their application limited by their design, context and actual linkages to performance.

M2: "I don't have any performance indicators that I know of other than the things we send back to the government in terms of publications, performance etc. They only have an impact in the sense that we collect them"

M3: "I think it depends on how they're phrased, what sort of job it is, and to what extent they capture the essence of the job as opposed to being trivial and box-ticking… shared goals are always important so if you get a clearly stated goal that has an indicator of what's happened and what's been achieved that's fine. What impact they've had, I don't know, not much within the schools"

M6: "Yes, I think they do [have an impact on teaching and research]. If, for example, that includes teaching evaluations and research outputs, because people are motivated by wanting promotion so they know it's become part of the culture that you have to have these evaluations done regularly, and that they make a difference. So if that's included then yes they have"

M7: "I think they're just fine. I think they do help us frankly. I think that no single indicator is sufficient and maybe no single indicator tells you a whole lot of anything but unless you have indicators that you can track consistently through time, you have no way to make a guess about whether your performance is on track or getting worse or better"

Middle managers believe that performance indicators can have value, but that existing measures are not aligned to departmental functions or goals.

…ON QUALITY IMPROVEMENT

Middle managers were unanimous in their view that the University had a culture of improvement. Three of the seven respondents discussed the nature of the improvement as being 'incremental' and two middle managers observed the links between quality improvement and the self-motivated nature of individuals at the University.

> *M2: "I think now there is a definite feeling that most parts of the University are trying to improve themselves and the University is trying to improve"*
>
> *M3: "Yes I do, I really do. I think that goes from bottom up as well as top down too. Most lecturers in my knowledge are always wanting to do a better job – they're amazingly committed. They might not always know how to do a good job, it might not always work but they're always committed to doing a better job. They're always re-writing, re-presenting, carving up classes in different ways to get better learning, yes I think there's definitely a culture of improvement"*
>
> *M4: "They're [academics] always looking to find ways to improve what they do, either making it a better classroom experience, doing their research better, being more efficient about their administration to minimise it as much as possible… So a culture of improvement is inherent in the way we go about things but whether it results in actual improvement will depend on whose perspective on what's an improvement!"*
>
> *M7: "And if you look at individual staff members… they're learning new ways to teach and deliver knowledge and in terms of research, every research lab in the school has been re-built in the last 8 years or so, so the quality of the facilities has gone up and that's required people to develop new skills: you have to take courses now even to be allowed to walk into a lab! If you're going to supervise grad students you have to take a course on how you do it. While all of those things can probably be seen as bureaucratic, they're also about management of quality in the institution and systematising that… If you think about the nature of the academic beast, we are prima donnas. Why are you getting a PhD? Well most of us are internally driven for whatever reason, academics are people who are highly self-motivated, they want to perform at a very high level and by and large they do. There are some stereotypes of the lazy academic but by and large these are highly motivated people who don't need to be pushed to improve. They want to improve. In fact, they get really grumpy if they're not given the means to do it"*

Middle managers believe that the University has a culture of improvement and this is directly related to the motivation and commitment of academic staff.

SENIOR MANAGERS

…ON QUALITY AND ITS EVALUATION

All three of the senior managers discussed quality in terms of research, teaching, assessment, course design and coherence, and the interactions that occur within the wider learning environment.

S2: "With teaching, just to start somewhere, there's a major role to do in course design, being clear about learning objectives, structuring degrees, disciplines and majors so that they are coherent… I think I would start with that—the course and program development is a key quality area…. There are issues of quality of assessment within the courses – is the assessment appropriate for the learning objectives, is it uniform as far as can be expected, is someone way out of kilter, are students being disadvantaged by the assessment regime, are students learning, are they getting enough feedback"

S3: "How does the University build its reputation? I guess the answer would be that a good proportion of its staff are seen to be doing work of international research standard, that they are publishing in generally recognised quality journals, that they're turning up to conferences, meeting their peers, the papers that they present are listened to and taken notice of, so to some degree in research those would be measures of quality"

S1: "If we think about quality of research and learning, then probably the single most important determinant of all is quality of staff… the people that come in here 'get' the idea of the university... The ones who get it are those who understand that it's a little bit of a messy process and it will never be perfect but we have this engagement with students, we're supposed to think about the important issues at the forefront of what's happening in our field or our discipline and nudge the boundaries a bit more in our own way. One of the terms I quite like that encapsulates a lot of this is this idea of scholarship – good staff are scholars and a scholar is someone who has a good grasp of some domain of knowledge – they're not necessarily at the leading edge, they mightn't be a Nobel prize winner – but they understand the field, the dimensions of the field, and the interesting questions at the edge, and so they can participate meaningfully in the debate but with depth"

Senior managers defined quality in terms of the processes associated with research and teaching.

Senior managers all discussed the improvement of teaching as the key to improving quality at the University. Mechanisms for teaching evaluation needed to be expanded and linked to effective teaching practice and student learning. There was general agreement that multiple methods of evaluation were required as mechanistic indicators were insufficient. The use of measures such as student surveys of teaching quality and graduate outcomes, together with numerical indicators of retention and completion were discussed alongside processes including staff appraisal and induction.

S2: "one is very tempted to use the seductive approach of mechanistic indicators so if we use broadly the same set of questions about student satisfaction questionnaires / surveys year by year, and if year by year the numbers seem to be getting better in terms of ratings that would be an encouragement that you were doing well… but there are issues about how we measure the quality of courses here… there's a quality of course delivery, there's a quality of student environment, are your staff conscious of students and embracing of student interests, conscious that they are, after all, the client? So I suppose retention rates are quite interesting, postgraduate completions, these are the sorts of measures that I think heads of schools need to be conscious of. The quality of

supervision is really critical and how often do staff meet with their students, is there a clear understanding of the roles of supervisors and the role of the thesis student, how much encouragement do people give, how much genuine time do they put aside for their student, have they got too many thesis students to supervise them all properly. So there's a workload thing in relation to quality too"

S3: "In terms of students, the quality of the students' experience is on a number of levels, strictly course related – is this a good course? That usually means: are the lecturers approachable? Do they give structured work? Do they respond well to questions and do they invite questions and invite interaction with the students? Are a university's graduates sought after by employers? Is there a track record built (over a lot of years) that in general employers have a degree of comfort and desire to employ your graduates as much or in preference to those from other universities. I think these aren't easy questions to answer – I don't think one could easily say tick boxes a, b, c, d, e and f and this embraces quality, but quality does embrace the sorts of things that I've just been speaking about… I guess maybe it's not like me designing an electronic circuit – it either works or it doesn't – is it something that can be reduced to a set of numbers in a formula – in a questionnaire or an evaluation? Or is quality so multi-faceted that you have to have a range of indicators - none of which individually you're going to die in a ditch for in terms of their voracity but overall if the basket of indicators is moving in some positive fashion you have some feeling that there is good quality"

The responses of the senior managers S2 and S3 above also provided some insight into the kinds of performance indicators perceived to be useful which included a broad range of information from the learning environment. In relation to research, the formulaic approach and quantifiable measures associated with PBRF provided for a 'uniform assessment'. That said, two senior manager respondents were uncertain whether PBRF would increase research quality, but noted that research activity would increase and this may be at the expense of the 'collective effort'.

S1: "While PBRF has shaken and rattled the system a bit, for the first time it's actually applied a uniform assessment across the system… it's definitely lifted the tempo of research activity and it will definitely effect the level of output. Now whether that equates to quality is a slightly philosophical question but lets be generous and say yes it will"

S3: "One's hope is that any serious government involvement in university affairs will be a productive and positive one so that you hope that it would give a wake up call to those areas within a university that perhaps have been coasting along for a while – not really putting the effort in but this is a difficult judgement to make because in my overwhelming experience, the overwhelming proportion of academic staff are dedicated and hardworking and if they are not hardworking in terms of publishing publications, they're probably even more hardworking in terms of teaching and student support and the way they develop their courses in innovative ways"

Senior managers commented that existing reward systems for teaching and learning were insufficient and could not compete with those for research which were associated with individual and financial success.

S1: "The reward system is critical – we have to do better there if we're serious about improving the quality of teaching and learning. There could be all sorts of rewards – financial, a bonus—we do have teaching excellence awards and they're a move in the right direction but the problem is that they affect only a few staff who are obviously doing it well anyway… and in the promotion criteria, it is there but the reality is that the bigger driver (particularly for a big jump to associate professor) is research. Pretty much 80% research. Even if we can tilt the scales 70% 30% teaching, staff may actually see that brilliant teachers can get promoted. It's all part of signalling... But the system is moving towards, like it or not, rewarding research capability and output comparatively more. If we're not careful the learning and teaching of students falls to the side"

S2: "What gave the PBRF teeth was really the financial consequences and in the end we all complied... Now we haven't managed to do something similar with learning and teaching yet. We could and should do it internally so as part of this quality framework we do need to consider effective incentives and rewards that clearly discriminate in favour of people who improve and leave the others behind"

Senior managers identify the improvement of teaching practice and student learning as central to the improvement of quality at the University. However, significant barriers to achieving this goal are present and associated with the complexity of the teaching and learning process, and the existing recognition and reward systems which reinforce research.

…ON QUALITY ASSURANCE

The two senior managers who provided images of quality assurance associated it with measurement and audits and gave mixed responses regarding the impact of academic audits.

S1: "With quality assurance I tend to think of people in white coats, clicking their pens and checking things off… [on academic audits] I think they help, but not as much as we might tell ourselves"

S3 "I think positively about academic audit... they probably don't tell us anything that we don't know but they do reinforce that we are correct in what we think is the case"

In relation to internal quality assurance processes, the senior managers discussed benchmarking, strategic planning and risk management. The impact of benchmarking on quality at the University was explored by two of the senior managers who provided different perspectives on the process.

S1: "in a teaching and learning environment I'm not sure what it means. Maybe a variant of that is best practice. I like that a bit better because its really just saying unashamedly we don't have to be systematic, we don't have to worry about issues of generalisability or sample representativeness, just lets find some examples of things, that on the surface of it, look really good, innovative or new

approaches to teaching, people that have wrestled hard with the question of large class teaching, what have they done. It might be a bit impressionistic and case-studyish but I don't see anything wrong with that. So best practice I prefer to benchmarking"

S2: "I think this University has probably not engaged with benchmarking yet but we say we're going to in our strategic plan and we've got to give that some teeth and work through how and in what situations we might want to benchmark and with whom"

The only senior manager to respond to the question regarding the impact of strategic planning was positive and noted that universities were still developing their abilities in this area. Risk management was perceived to have had no impact on quality.

S1: [on risk management] "Back to the white coats again. No impact."

Senior Managers appeared to be sceptical regarding the impact of externally driven quality assurance mechanisms focusing instead on the kinds of processes that could and should be developed and implemented internally.

…ON QUALITY IMPROVEMENT

Two of the three senior managers discussed the 'culture of improvement' as largely based on the work and motivation of individuals. The other senior manager was not as positive about the existence of a culture of improvement at the University because the individualistic nature of staff within the institution often impeded the ability to make strategic decisions on a collective basis.

S1: "I'm inclined to say yes, I think it does [have a culture of improvement] and I think that's a credit to a number of the staff. Even people who I would call really good teachers completely revamp a course. Now why would they do that? They're very happy to get the great teaching evaluation but I can think of two staff who say that was alright but 'lets have another go at this'. That's a culture of improvement, if you listen to tea room discussions when they happen there's a lot of talk about what's happening, teaching, what you're working on, not only in the research area, and I think that at the central university we've got some very good staff in the central administration that have the interests of students at heart – I see that on a number of occasions"

S2: "It's not what I would judge as a culture of improvement where you can't really have discussions about what we mean by research-led teaching without everyone flying off the handle and thinking they're going to be measured. We need a culture where people don't feel they're going to judged by it if they agree to it. They have to feel more positive about it, a culture that embraces improvement does move strategically and I think universities find it very hard to move or think strategically in all their core elements"

S3: "I think it would be fair to say yes, and I don't say that in an off-hand way. Most people are involved in the processes of learning themselves as well as the processes of teaching and genuinely want to improve and do better by whatever

measures are set for that…. people have chosen to be here because of the environment, the environment is interacting with students, learning, teaching, research and all these forward looking progress things, developmental, you don't stay where you are, it's a dynamic situation and you either delight in that and thrive in it or you get out of it. People that stay here accept that the culture is one of continuous moving forward and hopefully improvement on a number of levels"

The individualistic nature of staff in the University drives quality improvement but can impede 'central steering' at University level.

REPRESENTATIVES OF GOVERNMENT AGENCIES

…ON QUALITY

The three respondents from the central authority shared a focus on defining quality in terms of outcomes. Important outcomes were noted as learning, world-class research and value for money. Other outcomes discussed in the responses included enhancing student retention and completion, balancing spending on tertiary education, meeting the needs of the labour market, and remaining competitive in the international education market.

CA1: "I suppose quality has to be seen in terms of outcomes and in a way that's taking a very kind of arms length view of it in terms of measurables"

CA2: "For me, quality is enabling learners to get the best possible educational outcomes when we're talking about teaching. When I'm thinking about research, it's about world-class research. And when I talk about world-class I mean good world class! Not mediocre or average… It's interesting if you're thinking about the attributes of the graduates, it would seem to me that they're actually quite different depending on the discipline that you're involved in. So thinking about quality of outcomes, have you got a quality outcome based on the discipline or have you got a quality outcome based on the university? I'm not clear that people have unpacked that. They may not necessarily need to – I don't think we need to go to the nth minutiae of detail but there's some conversations that might be useful to have"

Views from the central authority define quality in terms of measures and outcomes for graduates.

…ON QUALITY EVALUATION AND IMPROVEMENT

Defining, measuring and evaluating quality were the key quality issues identified by representatives of the central authority. They were also perceived as the greatest barriers to creating a culture of improvement. There was agreement amongst the respondents that the focus needed to be shifted from easily measurable quantity-based indicators to the integration of both qualitative and quantitative information to inform planning, people and strategy. However, this discussion was presented in the context of deepening the understanding of quality teaching, research and learning, to facilitate 'drilling down' and 'measuring' those elements that could be correlated with quality outcomes.

CA2: "We sometimes spend a lot of time measuring what is easy to measure rather than measuring what really matters or focusing on what matters… We've had, in the past, a lot of information about quantity, about participation, how many people are participating in which areas. It's only recently that we've started doing work around retention within courses, successful completion of courses and I think some of the work around that gives us richer material"

CA3: "There's a number of aspects to quality… I think there are general things about an accepted level of quality across the board so there are organisational processes and reflections that are meaning that the organisation is moving forward in quality terms. I'd say there are things around having those monitoring and evaluation feedback loops that are checking for any failures as it were… And I think there is a mixture in going for the number-crunching things (learners in, research reports out) – you go for a variety of things you can measure as well as some more qualitative stuff in terms of student retention, student satisfaction, looking at staff retention, staff satisfaction, staff progression. I think there's also dimensions around value for money – it's one thing to be effective it's another to be efficient as well"

During discussions regarding the use of performance indicators the respondents agreed that they improved performance toward the indicators. It was also noted that effectiveness of the indicators was context-dependent, related to their design and limited by direct linkages to performance.

CA2: [on the impact of performance indicators] "Yes, whether it's positive or negative is arguable. I think in some cases it's been positive because articulating what matters is really useful. I'm not sure though that all the performance indicators we use actually articulate what matters. I'm not sure that we necessarily have the right balance between those that focus on the quality of teaching and quality of research critical success factors as opposed to other things that are easy to measure within that… The information also needs to be used to inform future practice and the challenge of indicators is that often people collect them and put them in an annual report and they don't necessarily make use of them"

CA1: "Yes definitely. That comes back to 'things that get measured tend to get improved'. If things aren't measured then you have this vacuum and they may or may not be improving. Provided the performance indicators are done properly. You can be mechanistic and set indicators that people will conform to but you really need a vast set that are reasonably comprehensive, secondly you need to understand the measures in their context and interpret them in that context. With those reservations, I have no doubt that performance indicators have a positive impact"

For representatives of the central authority, quality improvement is about finding the right measures to inform evaluation regarding the achievement of desired outcomes.

The immediate association of quality assurance with the NZUAAU and then with 'documents' was shared by two of the three respondents. The other respondent explicitly associated quality assurance with the setting of standards and assessment against those standards.

> *CA2: "The first thing that comes to mind is the Academic Audit Unit. I tend to think of one person or a section within the institution. I tend to think of manuals and dust on manuals!"*
>
> *CA3: [images of academic quality assurance] "A staid one. The Director of the Academic Audit Unit. A tidy and considered thing I guess"*
>
> *CA1: "The assurance is about making sure that they pass thresholds, firstly that there are thresholds and benchmarks that are known and things are assessed against them. That is distinguished from quality management which is about improving quality and getting progressive improvement to go beyond the thresholds"*

Academic audits, benchmarking, risk management, strategic planning, PBRF and CUAP processes were all perceived to have had a positive impact on the quality of research and teaching in universities. However, ritualistic compliance was noted by one of the respondents who observed universities tendency to 'play act' and superficially conform to new initiatives without depth of implementation.

> *CA3: "I think [PBRF] is a very powerful one that will improve the performance of researchers toward the indicators"*
>
> *CA1: "I don't think there's any question that quality audits have had a very positive effect"*
>
> *CA3: "I think strategic planning is an area for significant improvement in some parts of the tertiary sector. If I was to make a reflection on universities that isn't restricted to strategic planning, I would say that universities are very good at articulating themselves to be seen to be doing what government is asking them to do"*
>
> *CA1: [on the impact of benchmarking] "if you have benchmarks against which you're looking rather average, it causes you too many problems for you not to work on them. It would have a positive impact if it can be done properly. I think people have struggled with how to do it and getting sufficiently well articulated standards so you can actually create benchmarks"*
>
> *CA1: "I don't exactly know why the CUAP process works, in theory it shouldn't, and while I've seen some odd things happen it is robust…. After all, where there's been quality issues around recently, it hasn't been in the universities so for some reason CUAP is fulfilling it's role in ways that you wouldn't have expected"*

While there is a belief that internal and external quality assurance mechanisms have a positive impact on the quality of research and teaching, the desire for additional or alternative (auditable) measures suggests that the quality assurance mechanisms are perceived as insufficient determinants of quality in universities.

CASE STUDY FINDINGS: REVIEW

Quality is conceived very broadly in the context of the total learning environment within the University. For University staff, quality is an emergent property of a complex system comprising numerous interrelated factors such as services, support staff, academic staff, student learning, teaching, assessment, research, reward systems, participation rates, retention rates and graduate employment to name but a few. 'Quality improvement' in this context is the drive to do all of these things better both individually and in relation to the 'local collective'. For example, academic staff aim to improve what they do with reference to the procedures and 'standards' of their discipline and academic unit. Middle managers focus on the improvement of teaching, learning, research and the general operation of their academic unit. Senior managers maintain a similar focus to middle managers, but in relation to the University as a whole. In other words, academic staff, middle managers and senior managers associate 'quality' and 'improvement' with their roles and functions in the higher education system as outlined in Chapter 4 (pp. 57-58).

The views from respondents in the central authority are based upon a much narrower conception of 'quality' and 'quality improvement' which appears to be restricted to economic outcomes for individual students and the nation. Their interest in 'quality' and 'quality improvement' only extends to the measurement of these outcomes in a format consistent with government policies and strategies. These findings are consistent with the issues identified in the literature: the conceptions of quality held by the representatives of the central authority align with quality as 'accountability' and the demonstration of efficiency and effectiveness in the use of public resources. The accountability aspects of quality are further reinforced through requirements for reporting, audit and accreditation.

Compared with understandings of 'quality' and 'quality improvement', 'quality assurance' is a vexed term. In the minds of the University staff respondents the meaning of 'quality assurance' is clearly divided into approaches and procedures implemented internally for the purposes of monitoring and improving the quality of teaching and learning, and those imposed externally for the purposes of measurement and audit. Little value is placed on the 'external' approaches because they do not align with understandings of 'quality', or the 'improvement' of teaching, learning or research.

The perspectives provided by representatives of the central authority are different in that equal emphasis is placed on 'internal' and 'external' quality assurance processes with both seen as integral to 'quality' and 'quality improvement'. The suggested definition of 'quality assurance' as the methods and measures for internal and external accountability supports this

view. However, the responses of academic staff and middle managers indicate that quality assurance is something imposed 'from above' that requires compliance, not something for which they are expected to take an active role in relation to system design and development. This difference could be one of the reasons for the focus within the University on the improvement and evaluation of teaching. Given that the evaluation of research is positioned outside of the academic unit (and indeed the University through PBRF), teaching and learning is one of the few processes amenable to localised inquiry and intervention that can yield observable results. In other words, academic staff, middle managers and to some extent senior managers within the University believe they still retain influence on this core function.

In conclusion, the case study findings indicate that there is considerable variation in understandings of 'quality', 'quality assurance' and 'quality improvement', and the relationships between them are not articulated or comprehended by participants within the system. Consequently, the roles and functions of individuals and groups in relation to the design and implementation of appropriate quality assurance systems that could inform 'accountability' *and* 'improvement' are not aligned and questions regarding who does what, where, and for which purpose abound. 'Quality assurance', 'quality improvement' and broader conceptions of quality are disconnected.

Part III: Critique

The process of integrating and analysing the findings from the case study and the expanded dataset is aided by systematic boundary critique and self-reflection. Following the procedure and format applied in Chapter 4, the sources of motivation, control, know-how/knowledge and legitimation that underpin the nature and purposes of quality assurance are examined through systematic boundary critique. Self-reflection then highlights areas where my approach and assumptions may have influenced the information presented. A summary of the findings concludes the Chapter.

BOUNDARY CRITIQUE

A description of the procedure for boundary critique was provided in Chapter Three (pp. 39-40) and in Chapter Four a boundary critique was carried out in relation to the nature and purposes of universities. In the following section the process of boundary critique is applied to 'quality assurance' in the university system, integrating the ideas from the literature with information from the New Zealand context and case study. The boundary categories and definitions upon which the analysis is derived are provided in Appendix 3.

Sources of motivation: the value basis

The main beneficiaries of quality assurance comprise 'stakeholders', universities, governments, audit and accreditation agencies and the disciplines. The absence of individuals and groups directly involved with the improvement of teaching, learning and research is a noticeable shortcoming. Examining the purposes of quality assurance reveals

its focus on the establishment of frameworks and indicators that provide the means for individuals and groups outside a university to make judgements about its performance without necessarily understanding its purpose or functions. The frameworks and indicators also have a key role in the distribution of funding, particularly since measures of success revolve around the availability of information and compliance with documented plans and policies. Overall, the directions for quality assurance are set at university level and by agencies outside universities.

Figure 9 shows the beneficiaries of quality assurance linked to the main purposes they benefit from. Examination of the links between each of the beneficiaries and the summarised purposes reveals that audit and accreditation agencies, government agencies and universities are the primary beneficiaries of quality assurance. In each case, they are able to utilise the accountability information and assessment procedures for their own purposes. However, there are differences between the ways in which universities use quality assurance compared to the other groups. For example, quality assurance procedures within universities are likely to include additional methods and measures associated with institutional goals and directions.

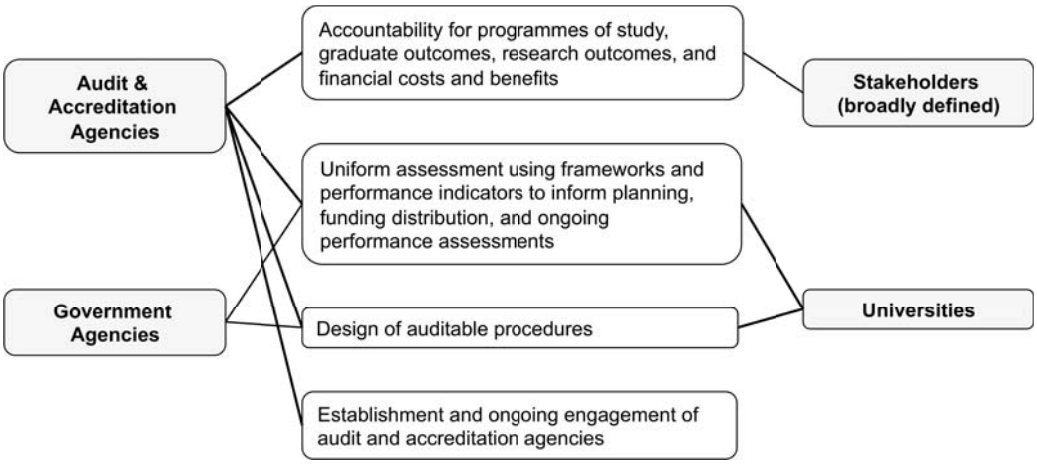

Figure 9: A map of the purposes and beneficiaries of quality assurance

The question of how 'stakeholders' benefit from quality assurance is an interesting one. Early in the present Chapter, information from the literature defined the 'stakeholders' served by accountability information only in very broad terms. However, it was argued in Chapter 4 that different stakeholder groups (and the individuals within them) had diverse and sometimes conflicting needs. Consequently, whether or not the general and generalisable information yielded from quality assurance processes is likely to meet the specific needs of stakeholders is a matter for debate. Indeed, work by McPherson & Shulenburger (2006) on behalf of the Association of Public and Land-Grant Universities in the United States of

America suggested that it did not, and collective action was taken to establish a 'voluntary system of accountability[8]'.

Alternative views of the relationships between the purposes of quality assurance and the beneficiaries are presented in Figures 10 and 11. Each figure maps the purposes of quality assurance as a process loop that flows from the development of procedures, their application, and the outcomes that could inform revisions to the initial procedures. Differences between the two figures highlight two of the key boundary issues that exist with respect to the purposes of quality assurance in the university system.

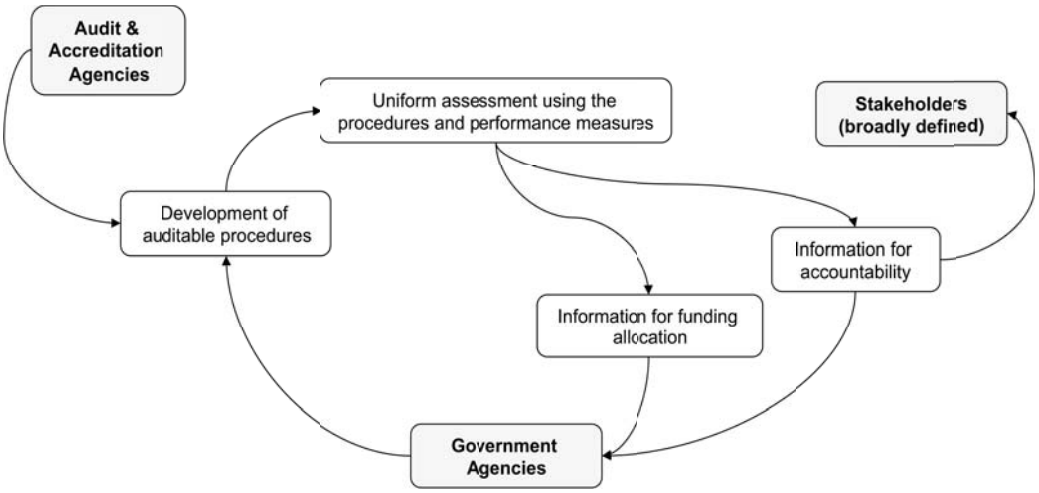

Figure 10: Process loop of the quality assurance purposes showing their relationship to primary beneficiaries outside universities

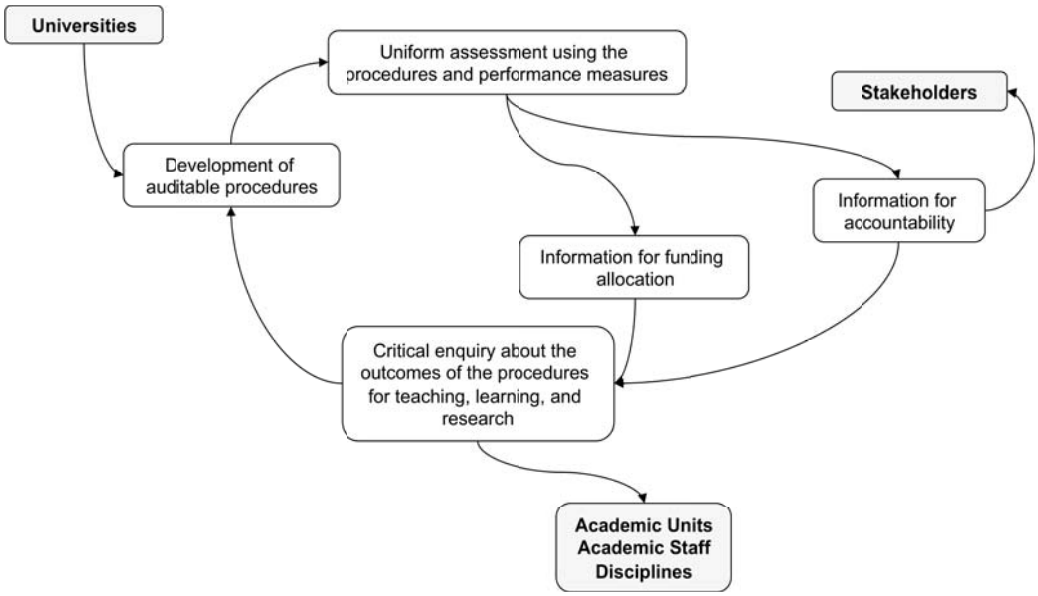

Figure 11: Process loop of the quality assurance purposes showing their relationship to beneficiaries inside universities

[8] The Voluntary System of Accountability has over 500 members. Further information is available at http://www.voluntarysystem.org/index.cfm?page=homePage

The first difference between the figures can be seen in relation to the role of critical enquiry. Inside universities (Figure 11) quality assurance procedures, measures and the information they provide can be used to support a process of critical inquiry regarding teaching, learning and research. Outside universities (Figure 10) no such process is apparent except via government agencies. The second difference indicated by the figures is that the external quality assurance processes have no direct linkage to teaching, learning or research. Overall, these differences suggest that quality assurance is currently operating from two separate value-bases in the higher education system. One base is linked with the 'accountability agenda' where universities are the subject of processes for external review that generate information which can be used for funding purposes and dissemination to the public. The other base is reminiscent of the concept of 'quality management' described in Chapter 2; that is, the design of processes that support the effective and efficient management of the organisation, including continuous improvement of the 'core business'. The relative 'weight' given to each of the value-bases is influenced by the sources of control examined in the following section.

Sources of control: the basis of power

Applying Ulrich's (1987; 2005) boundary questions enables identification of those who have the power to change measures of improvement within the system (decision-takers), and the means of control at their disposal. Analysis of the boundary categories and definitions identified government, universities, academic units, academic staff, audit and accreditation agencies as all having some degree of influence over quality assurance methods and measures. However, with the exception of government, the decision-takers were constrained by measures of improvement determined in other areas of the system. Means of control applied at different levels of the system to assure compliance with the measures of improvement were based on consequences for funding and/or reputation. Areas beyond the control of decision-takers outside universities were identified as disciplines, learning, critical review of teaching and research, and the 'motivation to excel'. These features were all associated with teaching, learning and research, advanced by individuals within academic units and disciplinary networks.

Figure 12 provides a diagram that relates each of the 'decision-takers' with the direction and span of their control. The Figure shows quality assurance as a series of 'control loops' based upon the ability of a decision-taker to alter the funding (F), reputation (R), or both funding and reputation (F+R) of other elements within the system. Areas where the control loop is based on both funding and reputation are those where the tendency to use quality assurance as a mechanism for control is the strongest (government—universities, government—academic units, universities—academic units, academic staff—research). Loops where control is based upon funding or reputation are weaker in comparison, but still enable the decision-takers to exert top-down influence on activity at other levels of the system. While these findings are interesting, the key to interpretation of Figure 12 lies in the directional aspects of each control loop. There are some control loops which are essentially unidirectional (government—national audit and accreditation—universities, programme

accreditation—academic units—academic staff) while others are omnidirectional (universities—academic units, academic staff—disciplines—academic units and their extension to teaching, learning and research). Unidirectional loops provide little opportunity for those involved or affected by quality assurance to influence the measures of improvement. The opposite is the case where the loops are omnidirectional, as established networks ensure that participants are involved in the selection and application of improvement measures. This suggests that only omnidirectional areas within universities have the potential to inform 'improvement' in addition to 'assurance'. However, the extent to which this occurs is a function of the recognised 'sources of expertise' which are explored in the following section.

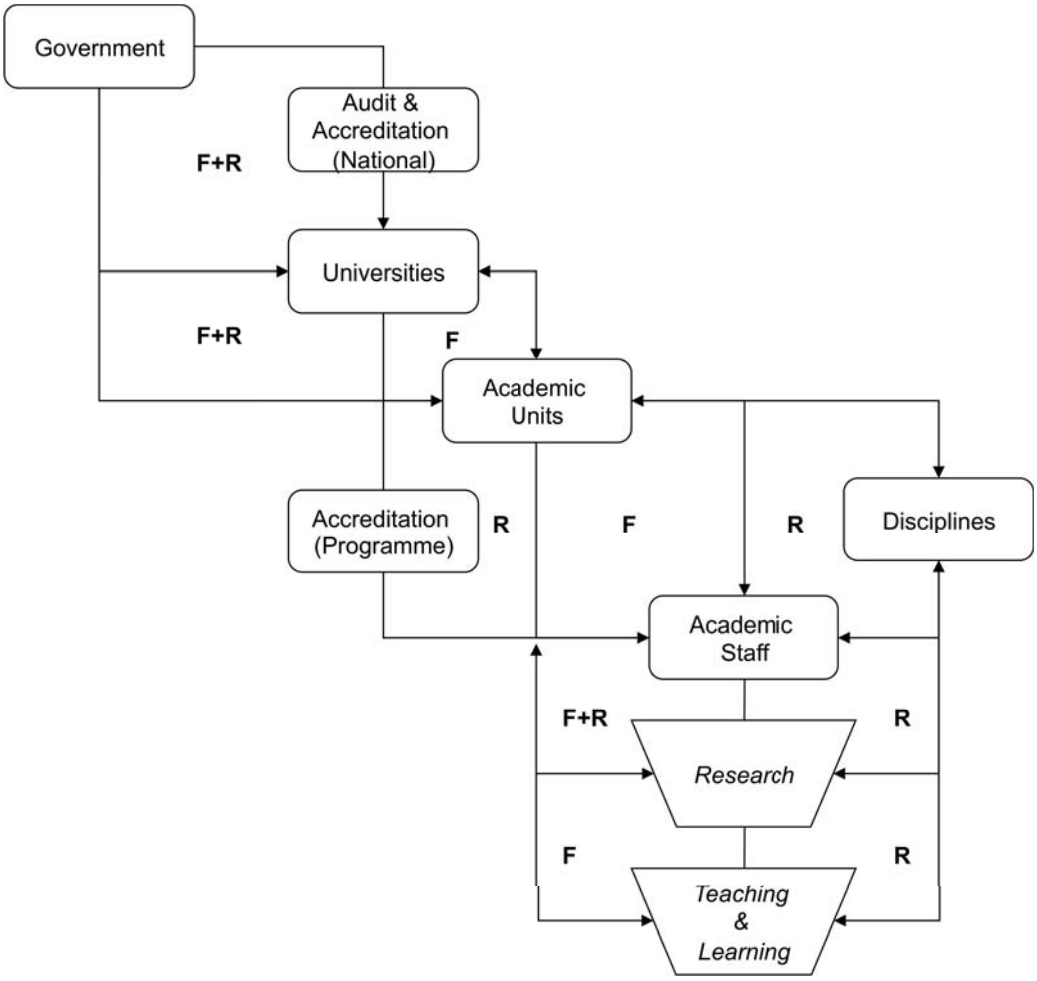

Figure 12: Map of the power relationships and means of control that form the basis of quality assurance in higher education

Sources of expertise: the basis of know-how/knowledge

The basis of know-how/knowledge within the system examines the relationships between the designers of the system and the expertise used to guarantee and improve the design. The boundary categories and definitions for this area (Appendix 3) reveal that government, quality assurance agencies and universities are the main designers of quality assurance with other levels of the system performing only a peripheral role. Sources of expertise that feed

into the system design can be broadly classified as 'inside' or 'outside' universities, with audit and accreditation agencies, professional bodies, and quality management models transferred from business organisations playing a prominent part. However, it is in relation to the guarantors of the quality assurance—those who validate the design and judge its success—where a significant degree of overlap is revealed. Government, audit and accreditation agencies tend to occupy the function of system designer, expert and guarantor. These features are especially apparent in the TEC in New Zealand which informs the design of performance measures for universities, implements that design, and then judges the success of the design in consultation with other government agencies. Universities in New Zealand also perform dual roles as designers and guarantors of the programme approval and accreditation processes together with the quality assurance systems implemented inside universities. These points are examined further with reference to Figure 13.

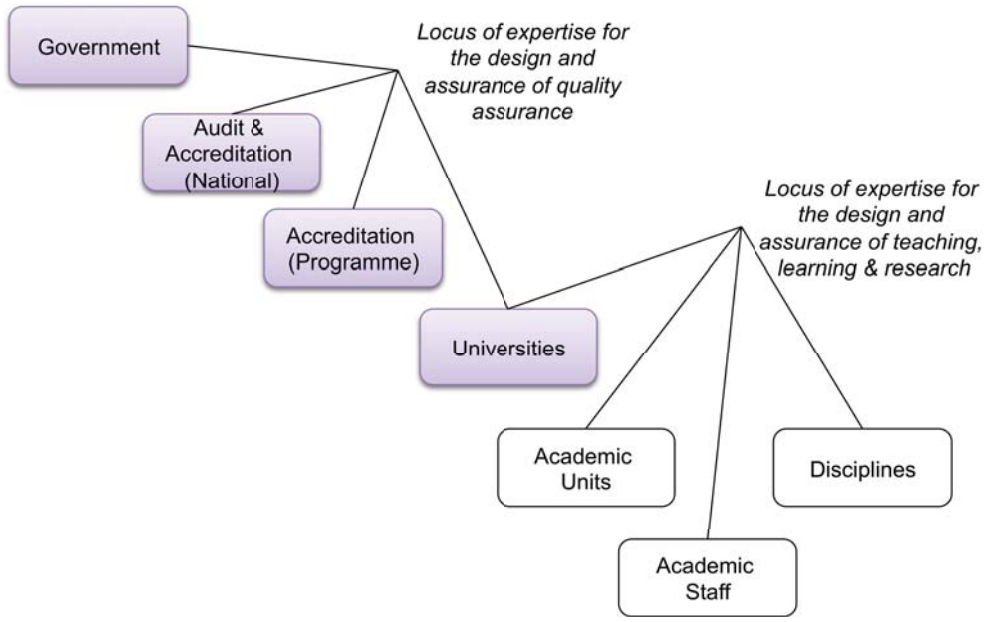

Figure 13: The basis of design and the locus of expertise for quality assurance in higher education

Figure 13 shows the designers of the quality assurance system in grey together with their locus of expertise. The important point to note is that the 'designers' of the quality assurance system are not necessarily those that have expertise at the operational level of teaching, learning and research. This schism suggests that the design of the quality assurance system could be biased toward observation and measurement of activity occurring within universities, rather than any form of evaluation that could differentiate between the merit of the activity, or the competence with which the activity is being performed. In other words, the basis of know-how/knowledge in quality assurance is centred in the categorisation and measurement of teaching, learning and research, while operational aspects likely to inform understanding and improvement remain outside of the quality assurance processes. Examining the extent of involvement of higher education beneficiaries in quality assurance provides a way to examine this further. Using a similar approach to that presented in Chapter 4 (pp. 86-87) for the boundary questioning around 'Sources of Legitimation', the

extent of engagement by those involved and affected by quality assurance is examined in the following section.

Sources of legitimation: the basis of legitimation

Ulrich's (1987; 2005) questions relating to the sources of legitimation within a system provide the means to investigate the scope and extent of influence exercised by various groups involved or affected by quality assurance. The following table (Table 21) matches the two elements of quality assurance design identified in Figure 13 (the design and assurance of quality assurance, and the design and assurance of teaching, learning and research) to the beneficiaries of quality assurance and higher education.

Table 21: Summary of Those Involved and Affected by Quality Assurance Design

Quality Assurance System Design Elements	**Engagement with those involved and affected by quality assurance**		
	Those directly involved	**Those partially involved**	**Those affected but not involved**
Design and assurance of quality assurance	Professional bodies Funding agencies Government agencies Quality assurance agencies (audit and accreditation) Universities	Employers of graduates Current academic and general staff	Current and potential students Parents of current and potential students Industry Graduates past and future Potential academic and general staff Academic units within a university Disciplines Local community and region in which a university is placed Society in general
Design and assurance of teaching, learning and research	Current students Current academic and general staff Universities Academic units in a university Disciplines	Professional bodies Industry Graduates past and future Employers of graduates Funding agencies Quality assurance agencies (audit and accreditation) Government agencies	Potential students Parents of current and potential students Potential academic and general staff Local community and region in which a university is placed Society in general

Examination of the information in Table 21 reveals several critical issues. The overall distribution of groups amongst the two elements of quality assurance design points to a

greater level of involvement occurring in relation to the design and assurance of teaching, learning and research. This relationship suggests that the 'democratic flavour' and attention to the needs of stakeholders purported to be an outcome of external quality assurance (p. 132) is largely absent from quality assurance design.

The universities appear to be in a very strong position in terms of direct involvement with both design elements. However, this may be weakened, given the strength of the accountability agenda within the value basis for quality assurance, and the unidirectional control of funding and reputation exerted by government and quality assurance agencies. That said, the pivotal role of a university as a mediator of quality assurance for accountability and/or for improvement is a significant finding that will be examined further in Chapter 6.

The relative placement of some of the other key groups within Table 21 highlights areas where the design and assurance of quality assurance strengthens or weakens their involvement. The most obvious examples can be observed with respect to current students, academic units within the university and disciplines, which are directly involved with the design and assurance of teaching, learning and research, but uninvolved in the design and assurance of quality assurance. Similarly, the roles of professional bodies, quality assurance agencies, government, and funding agencies are strengthened through application of quality assurance systems.

So what does this all mean? Essentially, the unresolved boundary issues arising from the underlying value, power, know-how/knowledge, and legitimation bases of quality assurance can be summarised succinctly in one key observation: the design and assurance of quality assurance is separated from the evaluation and improvement of teaching, learning and research.

SELF REFLECTION

Self-reflection provides a mechanism to explicitly recognise potential issues arising from the choices I made regarding the research design, presentation of information, and the interpretation of findings presented in this Chapter. Reflecting upon the ways in which the information and findings have unfolded there are five points for discussion arising from boundary setting and research methods. A sixth point is provided by way of concluding comments that discuss the partiality of this account of quality assurance in universities.

Reflections on boundary setting

1. Use of system levels as the basis for investigation of quality assurance.

Reflections on the use of system levels discussed in Chapter 4 (p. 51) have equal relevance to the findings presented in this Chapter. The design of the study based upon Becher & Kogan's (1980) system levels [individual, academic unit, university and central authority

(government)] and the association of quality assurance with each of those levels could have limited consideration of activity occurring in other areas of the system. For example, the role played by audit and accreditation agencies (see below in Point 4) was described in the Chapter as an extension of the government in most cases even though there are agencies (e.g., the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), the European Association for Quality Assurance in Higher Education (ENQA), and the Asia-Pacific Quality Network) that reside outside the system levels. These aberrations caused me to question whether there might be other areas of quality assurance activity carried out within or across the system levels that I may have overlooked. However, if this is the case then there is evidence to support the proposition that the implementation of quality management in higher education has been advanced by adding structures rather than assigning related responsibilities to key players (e.g., academic units) within the system. This could explain why 'quality assurance' was seen by many case study participants as an imposition rather than something for which they were responsible.

2. The impact of terminology on the inclusion (or exclusion) of meanings, processes and structures associated with quality assurance in higher education.

The use of terminology (quality assurance, quality improvement, quality enhancement, quality audit, accountability, evaluation, assessment, review and so on) within the literature was identified as a significant issue throughout the present Chapter. In attempting to deal with this issue I chose to set out working definitions of quality assurance and quality improvement in the early stages of the Chapter, and to then use these definitions to assist with the interpretation of the material presented. I have regularly questioned whether this decision influenced my presentation of information from the literature and case study, and wondered about the extent to which it coloured my discussion of key findings. I believe the important point to note is that I have tried to make the boundaries of my analysis (in terms of the meanings, structures and processes) transparent. I have also attempted to make the bases for my interpretations (quality assurance as methods and measures for internal and external accountability, quality improvement as a process of critical inquiry applied to the outputs of quality assurance) clear. I believe this is something that many commentators on quality assurance have not done and that has made research on 'quality' all the more challenging.

3. Effectively capturing systems of process – the role of human resource management.

One of the most difficult sections to piece together in the Chapter was the identification and discussion of systems of process and I fear that I have made a significant omission. The omission became apparent as I was analysing the case study findings and in particular, the perspectives of middle managers and academic staff. Reflecting on the material collected, there was one quote from participant A10 that continued to resonate with me throughout the process of data capture, analysis and reporting: "the critical thing is choosing people who will care and enabling them to keep caring" (p. 137). This prompted me to reconsider the

case study findings and observe the importance of 'human resource management' as an underlying theme in the responses and, consequently, as another process critical to quality assurance. Although aspects of human resource management were partially captured in the discussion of 'evaluation' (especially as it pertained to the methods and measures for assessment of individual performance), it is probable that other processes such as staff appointment and induction are of equal importance. Limitations to the researcher's time (and energy) precluded a retrospective analysis and review of 'human resource management' as a quality assurance process in higher education. Instead, the omission is identified here as a matter arising from my self-reflection on the case study findings, and an area to be incorporated in future investigations of quality assurance in universities.

4. Choice of case study participants and specifically, the exclusion of representatives from audit and accreditation agencies.

The comments I made in Chapter 4 (p. 91) regarding the choice of case study participants and the impact that exclusion of involved and affected groups (e.g., students and general staff) might have had on the discussion and findings also apply to the work in this Chapter. At the outset of the research I did not realise the extensive role that audit and accreditation agencies played in the design of quality assurance in universities and in many respects it would have been useful to include representatives from these agencies within the case study design. However, it is reasonable to suggest that the sheer volume of material produced by such agencies and referenced within the Chapter has ensured that their views have not been overlooked.

Reflection on methods

5. Use of systems windows and boundary critique as analytical frameworks within the Chapter.

I believe that the use of systems windows (meaning, structure, process and knowledge/power) as an analytical framework proved invaluable for the presentation of information and findings in the present Chapter. Given the inconsistent nomenclature, blurred responsibilities, and opaque definitions surrounding quality assurance and improvement in higher education, the systems windows facilitated a systematic approach that prompted me to think critically and creatively about how and where the various aspects of 'quality' fit. Exploring quality assurance and improvement in terms of meanings, structures, processes and knowledge/power relationships also provided the means to integrate findings in the literature—many of which focused on only one or two of these elements. I believe the outcome of this approach is a more 'systemic' perspective on 'quality' in universities which incorporates an account of the complex interactions occurring at different levels in the system. Similarly, the process of boundary critique proved useful in affirming findings from the literature regarding quality assurance as a mechanism for control, as well as highlighting

the inequitable participation of those involved and affected by the design and assurance of quality assurance.

6. Some concluding comments

Overall, exploring, examining, and integrating the breadth of material on quality assurance in higher education proved very challenging. I had ongoing concerns about the comprehensiveness and continuity of the information provided in this Chapter, and nagging doubts that key elements were missing. When I reflected on these matters I realised that this is actually a theme pervading much of the literature and the information from case study participants. There are many different quality assurance frameworks, typologies of indicators, and approaches to evaluation and these change consistently in response to a range of factors including expertise, knowledge and other contextual factors. Consequently, 'one true account' of 'quality' in higher education simply does not exist. Indeed, the very idea that there could (or should) be one framework, one approach, or one set of quality indicators is an anathema to those dedicated to learning through teaching and research. With this in mind, I am satisfied with the idea that I have presented a systematic, albeit selective account of quality assurance that explores some of the critical issues. Some of the areas that could have been explored in more depth have been noted in earlier in this section, and there are undoubtedly others that will be revealed as our understanding of quality in higher education improves.

CHAPTER REVIEW: THE NATURE AND PURPOSES OF QUALITY ASSURANCE IN UNIVERSITIES

Understanding of quality assurance is linked to improving accountability, improving control and compliance, and improving the assessment of teaching and learning. Examination of this understanding provided the basis for a definition of quality assurance as the methods and measures for internal (i.e., within universities) and external (i.e., to stakeholders outside universities) accountability. Quality improvement was then defined as quality assurance coupled with critical enquiry (or research) applied in a context where improvements were desired. These definitions aided the interpretation and analysis of findings throughout the Chapter.

One of the first observations made was the considerable variation that exists in the understanding of 'quality', 'quality assurance' and 'quality improvement'. The terms were ill-defined in the literature and the relationships between them rarely articulated. The same could be said about quality assurance and improvement in the New Zealand tertiary education sector as a whole, with the exception that responsibilities for quality assurance and improvement were identified: the responsibility for quality assurance rested with Government and its agencies, while responsibility for quality improvement lay with individual TEOs. This divide between quality assurance and improvement was also evident in the images of quality assurance held by participants in the case study. For University

staff, quality assurance was associated with an iterative approach to the improvement of teaching, learning and research, and 'quality' thought to be an emergent property of a complex system comprising numerous interrelated factors. In contrast, representatives from government agencies held a much narrower conception of quality assurance and improvement based on economic outcomes for individual students and the nation, and using evidence derived from selected numerical measures of performance. A conclusion was reached that the roles and functions of individuals and groups in relation to the design and application of quality assurance systems that could inform 'accountability' *and* 'improvement' were not aligned. 'Quality assurance', 'quality improvement' and broader conceptions of quality were disconnected.

The disconnections between quality assurance and improvement were also present in the processes that underpinned them. Evaluation—broadly defined as a process undertaken to determine the merit of an activity—was identified as the substance of quality assurance and improvement. Inside universities, approaches to evaluation were flexible and derived from multiple methods and sources to take account of a range of purposes, disciplines, contexts and outcomes. This approach was contrasted with evaluations pursued for quality assurance purposes which were characterised by defined outcomes, prescribed methods and measures, and a linear approach designed and administered by agencies outside universities. The difference in the approaches was linked to their overarching purposes—quality assurance as an aid for discovery and understanding to inform the improvement of teaching, learning and research, or quality assurance as a mechanism for external accountability. The conclusion drawn, and reinforced during the application of a systematic boundary critique, was that the design and assurance of quality assurance was separated from the evaluation and improvement of teaching, learning and research.

Overall, findings from the literature, case study and critique indicate that:

- quality assurance is imposed from outside universities by government, accreditation and audit agencies intent on improving external accountability;
- value is placed on quantifiable outcomes and standardised reporting which seeks to control variation, and facilitate comparisons between the performance of different universities;
- rules and procedures for establishing quality assurance are disconnected from teaching, learning and research advanced within universities, academic units and disciplines;
- compliance with the requirements of quality assurance is assured coercively using the threat of changes to the funding and reputation of a university;
- privileged positions in the system are occupied by those that have the ability to change the measures of improvement, namely, government, accreditation, and audit agencies and the universities themselves, although their position is weakened by the strength of controls on funding and reputation.

Chapter 6: Problem Solving Quality Assurance in Universities: Discussion and Conclusion

The purpose of this final Chapter is to advance the third research objective to develop an approach to quality assurance that recognises the nature and purposes of universities. The Chapter is set out according to problem setting, structuring and solving followed by a discussion and conclusion. Problem-setting briefly retraces the context for the present study including the research objectives. Problem-structuring brings together key points from Chapters 4 and 5 to 'redefine the problem' and identify the areas likely to be of greatest importance to the advancement of the research objective. In the third part of the Chapter, VSM is used as an aid for 'problem-solving' with reference to quality assurance in New Zealand universities. A number of potential 'system faults' are highlighted and an attempt is made to identify particular areas where improvements to the quality assurance system would lead to reconciliation with the nature and purposes of universities. The Chapter concludes with a discussion of the main findings from the present study and their relationship to themes in the literature.

PROBLEM-SETTING

Chapter 2 traced the history of quality management in business organisations from early systems of inspection and control to quality as a cycle of 'plan, do, study, act' for the purposes of understanding and improving business processes and organisational management. The pinnacle of quality management—TQM—later situated quality management tools and methods within the broader social context of the organisation and its wider environment. The shift from quality management to TQM was accompanied by claims about the efficacy of the model for all types of business organisations. However, as the use of TQM expanded so too did understanding of its failings. Reported successful interventions were tainted by problematic definitions of 'quality', contextual factors that impeded the full application of TQM in specific organisations, and a lack of tangible evidence that TQM had made a demonstrable difference to profit, productivity, or customer satisfaction.

The transfer of quality management processes and techniques to higher education was positioned as part of the NPM reforms that accompanied growing concerns about access, accountability, resourcing and diversity. Quality management became one of a battery of techniques used with a view to enhancing the transparency, standardisation, and measurable outputs of higher education so that the government and general public could be assured that their higher education system was economical, efficient and effective. Despite widespread and persistent use, quality management in higher education exhibited failings similar to those identified in business organisations. One of the main issues was that multiple conceptions of quality, together with conflicting needs of 'customers' (or 'stakeholders'), presented difficulties for defining 'improvement' in the higher education context. Furthermore, the economic rationale appeared to place significant weighting on quality management as a mechanism for control, which was reinforced by the dominance of

inspection and quantitative performance measures as the main quality management methods applied to universities.

The Chapter concluded that 'quality' in higher education was a 'wicked problem' largely because the understanding of 'quality' differed according to the social, political, and technical knowledge of diverse groups that had interests in higher education. The relationships between the groups were unclear and it is possible that the needs of some groups were being constrained by the wants of others. The research question was then posed about whether or not existing approaches to quality management in higher education were an appropriate fit for the context, and the proposal made that CST could be used to enhance understanding of the problem(s) and contribute to identifying alternative approaches to quality management that could recognise the nature and purposes of universities.

The design of the study and the critical systems approach including the 'package' of systems tools and methods was the subject of Chapter 3. Empirical data for the investigation was drawn from the New Zealand context using published material and interviews with participants who operated at different levels (and potentially different perspectives) of the New Zealand tertiary education sector as a case study. An analysis of the international literature enabled broader perspectives on 'quality' and higher education to be elucidated and incorporated in the study. The package of systems methods included metaphor analysis, systems windows, systematic boundary critique and self-reflection. The application of these methods, first to the nature and purposes of universities and then to 'quality assurance' in universities, was the subject of Chapters 4 and 5, respectively. A substantive analysis was presented in each Chapter according to a consistent framework that examined systems of meaning, structure, process and knowledge/power using information from the literature. Empirical data from the case study provided the means for a localised perspective on some of the key issues identified in the literature, and the application of systems methods formed the basis for an overall analysis of findings.

As the analysis of each aspect of the research unfolded, different understandings of the purposes of higher education and of quality in universities were revealed, and the related processes and structures were discussed. A complex picture emerged of purposes, procedures, methods, processes, power, and the interactions that occurred between these elements. I believe that the findings from the Chapters fulfilled the research objectives to investigate, compare, and contrast perceptions of quality at different levels of the university system, and to use systems thinking to examine assumptions regarding the nature and purposes of quality assurance. What remains is to examine and problem-solve conflicting perceptions in order to develop an approach to quality assurance that recognises the nature and purposes of universities. The following section on problem-structuring is the first step in this process, highlighting key findings from Chapters 4 and 5 followed by a discussion of areas to be addressed through problem redefinition and problem solving later in the Chapter.

PROBLEM STRUCTURING

The purposes of universities

Examination of the purposes of universities was the subject of Chapter 4 where the relative stability of universities' missions for knowledge creation, preservation and transmission was observed. In the New Zealand context, the Education Act (1989) described universities as autonomous institutions that promoted advanced learning through a diversity of teaching and research which were closely interdependent. Information obtained from the case study participants at different levels of the university system reinforced the broad functions of New Zealand universities set out in the Act: universities were consistently described as places where advanced learning was fostered through teaching and research. Emphasis on the integration of teaching and research was especially evident in the views of academic staff and middle managers, whereas senior managers and representatives of government agencies presented a broader conception of teaching and research as 'learning and scholarship'. Thus, the idea of universities as centres for learning was uncontested within the literature and the case study findings, although differences emerged regarding who is, or should be, the beneficiaries of that learning.

The systematic boundary critique reported in Chapter 4 revealed that two world-views governed the functions and purposes of universities—the social view and the economic view. The social view canvassed knowledge creation, preservation and transmission for the benefit of individual learners, society, and advanced learning for its own sake. The economic view emphasised knowledge creation and transmission that benefited the economy and the labour market. The interaction between these world-views was manifest in the strong political dimension that operated within and across the university system. References to the political aspects of university life and the conflict that existed between functions, individuals and groups were reflected in the views of academic staff in the case study, and in the dominance of the political and cultural metaphors within the literature. A recurring theme throughout the Chapter related to the primacy of the economic world-view which was pursued at the expense of the social outcomes. Information from the New Zealand context was particularly compelling on this point.

The functions of New Zealand universities presented in the Education Act (1989) are described with reference to their social and economic benefits with more or less equal weighting given to each. However, recent policy and strategy documents, including the TES 2010-2015, focus mainly on the economic benefits of universities rather than their broader social functions. Indeed, the existing 'measures of success' for universities in New Zealand are restricted to those that can be understood in economic terms with priority being given to the generation of knowledge and delivery of tuition that could benefit the national economy. Consequently, the issue of whether the long-term functions of tertiary education as set out in the Education Act (1989) are served by the relatively short-term TES is questioned.

Roles and functions within the university system

Understanding the roles and functions, and the rules and procedures applied at different levels of the higher education system was the subject of discussion around systems of structure in Chapter 4. The literature provided a foundation for clarifying the roles of government, universities, academic units, disciplines and academic staff which were summarised in Table 13. Of particular interest was the role of universities which provided a vehicle for local interpretation of knowledge creation, preservation and transmission. Their role within the system was to develop and advance an institutional identity based upon the needs and requirements of broad constituencies including cognate individuals and discipline areas. Institutional autonomy and academic freedom were discussed as necessary requirements of the higher education mission, subject to regular demonstrations of academic and ethical standards. The discipline also emerged as a critical element in the higher education system providing the rules, procedures and wider reference system for the creation, preservation and dissemination of knowledge.

The role of the government was identified as representing and safeguarding the public interest in higher education. This involved assurance of minimum standards for efficient and effective education delivery and reconciliation of the purposes and functions of individual universities with those of others in the education system alongside broad policy directions. This pattern was consistent with the functions discussed by the government agency representatives in the case study who described their roles in terms of intelligence gathering and the synthesis of evidence that would influence tertiary policy.

Other information obtained from the case study and from published material in New Zealand provided a rich source of data for understanding the functions of academic staff, academic units and the university. Academic staff made and shaped the creation, preservation and transmission of knowledge through research, teaching and their integration. Their role was multifaceted and required careful balancing of allegiance to their discipline, their academic unit, and their university in the context of their own personal strengths and capabilities. Academic staff believed they took their responsibility for continuously improving their own performance and that of their students seriously, and that their function within the system had continuity across time and place.

Coordination and management of teaching and research was an academic unit function combining aspects of financial and human resource management (e.g., induction, professional development and staff appraisal), and pastoral care and custodianship for individuals (staff and students) and disciplines. Academic units were also reported to have a key role in the design and development of programmes of study including assessment of, and support for, student learning. Responses from middle managers in the case study affirmed these functions, but also indicated the importance of contextual factors such as disciplinary affiliations, and the location and history of the University in which they resided. The idea of

balancing multiple roles, as an intermediary, an enabler and a facilitator was a theme common to the observations of middle managers about their role and functions.

The responses of senior managers interviewed for the case study suggested that their function within the University was not dissimilar to that of a middle manager. However, in the discussion of systems of knowledge/power it was apparent that decision-making about the control and coordination of higher education through the setting of rules and procedures and the distribution of funding was primarily located at university and government levels. Systematic boundary critique affirmed this observation and underscored the privileged position of the autonomous university as the lynchpin in the determination of relevant stakeholder's interests to be served, values to be endorsed, and the resource and policy constraints (or enablers) to be applied at the academic unit, discipline, and (by association) academic staff levels. Furthermore, the role played by the TEC in influencing the universities' plans and determining their funding challenged their autonomy and diminished the strength and status of academic units, academic staff and disciplines. In other words, the predominance of controls implemented at government and university levels was such that the views and values at other levels of the system were marginalised, and the extent to which diverse beneficiaries of higher education could be involved in its design and development were inconsistent.

The PBRF was used as an example of how policy levers implemented at government level to advance an economic world-view have caused significant tension and conflict at other levels of the system. The perceptions of academic staff, middle and senior managers within the case study University were almost unanimous in their views of the PBRF as a mechanism that undermined the ability of academic staff to continuously improve their teaching and research. One of the reasons for this related to the relative value placed on teaching and research within the University, and the fact that emphasis on one or other activity at another level of the system had a detrimental impact on the ability of University staff to manage their own roles effectively.

Important processes

Key processes in universities were identified in Chapter 4 including teaching, learning and research. Implementation of these processes was largely dependent on the endeavours of the individuals within universities and all were grounded to some extent within disciplines which provided reference systems for the development, evaluation and communication of knowledge.

Research was discussed as a systematic process of personal enquiry, reflection, and the creative integration of evidential data within a disciplinary framework. Important factors in the research process were identified as time for deep immersion in a particular problem, independence, and the availability of adequate facilities and resources. Consequently, the research context was critical because individual capabilities and the socio-economic

environment within an academic unit, university, and the wider system influenced the conception and conduct of research. Research, and perhaps more importantly the 'products' of research (e.g., publications and access to public funding), were reported to be the primary currency of reputation for academic staff, academic units and universities.

Pivotal to the teaching and learning process was the level of interaction and engagement between students, between students and teachers, and between students, teachers and learning resources. Curriculum design and the assessment of student learning provided the framework for these interactions within the broader structure provided by the discipline. An important observation was made that teaching and learning were essentially private pursuits of individual academics and students. Unlike research with its tangible products, the outcomes of teaching and learning were difficult to measure and this shortcoming was proposed as one of the reasons for perceptions that it was undervalued in universities.

The interdependence of teaching and research was another element that received attention in Chapter 4. Exploration of this element hinged upon viewing the processes of teaching and research as a means of inquiry and learning. The difficulty of measuring the interdependence of teaching and research was observed given the complex array of factors that influence the teaching and learning processes. Again, individual academic staff were key determinants of the extent to which teaching and research were interdependent, the central idea being that research and teaching were most likely to interact when staff were engaged with both activities.

The decision-making processes that occurred within universities were also identified as a critical component. Both managerial and intellectual forms of decision-making were identified as equally important because they provided for debate regarding the construction and implementation of the institutional identity. A distinction was made between managerial hierarchies that managed the tangible asset base, and collegial decision-making which preserved values such as diversity and pluralism, and supporting democratic approaches to the mitigation of differences across disciplines.

The importance of the teaching, learning, research and their integration within universities was confirmed in the case study findings. Staff from the case study all provided images of the University in terms of the way in which it functioned which was seen as very different from other types of organisations. Of particular importance was the collegial decision-making process which could take into account the pluralist nature of the University, as well as the inherent culture of individualism that exists across diverse areas of teaching and research. In contrast, responses of representatives from the government agencies appeared to place little value on how universities functioned, focusing instead on the valued outcomes of knowledge creation and transfer, advanced learning and service to industry and the economy.

The purposes of quality assurance

The purposes of quality assurance were examined in Chapter 5 where it was observed that the main purpose was to improve accountability to stakeholders outside universities. The link between quality assurance and accountability was enacted through the public availability of data and information related to programmes of study and student outcomes, institutional performance and value for money. Generic frameworks for gathering and presenting quality assurance information strongly reinforced the external accountability dimension, facilitating external scrutiny and privileging the use of quantitative performance measures that could be collated and compared across universities.

Information from the New Zealand context indicated that it was no exception to the trends identified in the literature. Accountability to government, students, and the general public was emphasised in the recent tertiary reforms as an important outcome of quality assurance alongside the disclosure of evidence regarding the strengths, weaknesses and performance of TEOs. Despite detailed information already available through annual reports, performance against additional criteria determined by Government agencies was a key element of the new quality assurance arrangements and an ongoing requirement for receipt of government funding.

The idea that quality assurance provides a mechanism for advancing a range of political agendas was affirmed by the dominance of the political metaphor observed in the literature. Examination of the linkages between the purposes of quality assurance, the methods used, and its beneficiaries using boundary critique revealed that the main beneficiaries of quality assurance were government, audit and accreditation agencies. Networks at university level were also identified as beneficiaries, but their ability to adapt and utilise quality assurance information was constrained by the needs and requirements of external agencies. Discussion of the systems of knowledge/power revealed how compliance with quality assurance procedures was assured, coercively, using the threat of reduced funding and/or consequences for the reputation of a university. In New Zealand this link was made explicit in the Education Act (1989) where authority was given to the TEC to withdraw or suspend the funding of individual TEOs if they did not provide the information required or meet performance thresholds. Quality assurance was therefore cast as a mechanism for control which formed the basis of power for agencies outside universities and individuals or groups at university level.

The idea of 'improvement' being an outcome of quality assurance was very much secondary to the purposes of enhancing accountability; moreover, it was complicated by the different understandings of 'improvement' held at different levels of the higher education system. Information from the New Zealand context suggested that 'improvement' (or quality enhancement) was determined by Government to encompass planning and review processes based upon authentic 'self-reflection' and leading to 'strategies for improvement'. It was argued that notions of 'improvement', 'accountability' and 'quality assurance' were

conflated in New Zealand and the PBRF was used to demonstrate this point. The PBRF was described as fulfilling multiple purposes such as encouraging excellence in research, improving its average quality, improving accountability, assisting with funding allocation and applying a consistent quality assurance framework. The general approach to the PBRF was the same as that observed in the literature to 'improve external accountability' through the application of generic frameworks that incorporated quantitative performance indicators and public scrutiny of comparative quality scores. The conclusion reached in the Chapter was that the PBRF was simply a funding mechanism that provided another means of improving the accountability of universities and their staff for the research produced.

The distinction between quality assurance as an externally imposed activity for accountability and control, and as an internal activity for improving teaching and learning was a common theme in Chapter 5. The findings from the case study revealed a clear division in the minds of University staff between conceptions of 'improvement' promulgated by agencies external to the University (which were thought to add little value), and internal approaches to quality assurance which were directly associated with improving the quality of teaching and learning. For University staff, quality was an emergent property of a complex system involving numerous interrelated factors. 'Improvement' in this context was based upon the drive to do everything better for the benefit of the local collective be that the discipline or the academic unit. In contrast, views of the government agency representatives indicated a much narrower understanding of 'improvement' based upon the contribution of universities to graduate and market outcomes.

The potential of linking 'quality assurance' with 'quality improvement' was examined with the aid of a boundary map that explored the ability of decision-takers at different levels of the system to change the measures of improvement. A key point was made that only universities, academic units, academic staff and disciplines had the potential to use the information yielded by quality assurance for the purposes of improving teaching, learning and research. However, discussion of the basis for know-how/knowledge in relation to quality assurance identified that these groups were positioned as passive recipients of quality assurance information. The sources of expertise contributing to the design of quality assurance systems were actually outside universities. Consequently, the design and implementation of quality assurance occurred at a distance from teaching, learning and research.

Within Chapter 5 it was proposed that quality assurance could be defined as the methods and measures for internal (i.e., inside a university) and external (i.e., outside a university) accountability, and quality improvement as quality assurance together with a process of critical inquiry conducted in the context of the institutional identity. The boundary critique in the Chapter showed that a process of critical inquiry was largely absent from the quality-as-accountability agenda, and the development of internal accountability mechanisms that could encourage critical inquiry were constrained. This observation was affirmed in the discussion of systems of knowledge/power where external quality assurance requirements

were found to impede the ability of universities to make autonomous decisions about what should be valued and measured in relation to their own missions and identities.

Roles and functions in relation to quality assurance

The alignment between roles and functions in relation to quality assurance at various levels of the higher education system was examined in Chapter 5. The picture revealed was one of confusion arising from a lack of understanding within the system regarding who did what, where, and for which purpose. The overall result was that quality assurance and quality improvement were disconnected in both meaning and operation at different levels of the education system.

Findings from the literature indicated that the government's primary role was establishing a framework for reporting performance against which universities demonstrated their accountability. This involved threshold standards for operation and the use of audit and accreditation agencies to assess whether or not standards were met. This general approach had been implemented in New Zealand where performance reporting was managed by the TEC through the application of performance indicators and threshold benchmarks, and the negotiation of university's 'investment plans'. The responsibility for university accreditation and audit functions was delegated to the NZVCC in the Education Act (1989), and made operational via CUAP and the NZUAAU. In addition to these QABs, there were a number of other accreditation agencies that determined professional standards and influenced education and training for particular programmes, such as teacher education, engineering and medicine.

The role and function of a university for quality assurance was essentially one of mediating between external accountability requirements and the needs of staff, students and stakeholders in pursuit of the continuous improvement of teaching, learning and research. These duties required the selection, application and ongoing evaluation of methods and measures that indicated performance against institutional objectives while improving a variety of activities and services. It was at the university level of the system where external quality assurance requirements were translated and adapted in order to fit the local context, and individuals or units were used for this purpose.

The literature was also used to examine the role of the discipline, which was identified as a critical element of the quality assurance framework for teaching, learning and research. In fact, the discipline provided both the structure and the process for the creation, preservation and transmission of knowledge, which included elements of self-regulation and external peer review. The role of academic boards within universities was discussed briefly in relation to the maintenance of standards for teaching, learning and research, but there appeared to be no evidence that these entities fulfilled an important function in the university-based quality assurance system.

Investigating information regarding quality assurance roles and functions in the New Zealand context, including findings from the case study, was especially illuminating. One of the key findings was that the quality assurance roles and functions were clearly articulated for agencies external to universities, but not for universities or their staff. Responsibility for the design of the quality assurance system rested with the TEC and the NZVCC. Formal responsibility for quality assurance was not specifically designated to universities in any of the materials examined. Instead, the role of a university was confined to improving performance against the external criteria and complying with the requirements set. That is not to say that universities ignored their responsibility for the design and implementation of quality assurance. On the contrary, findings from the case study showed that academic staff, middle managers and senior managers all associated quality assurance and improvement with their roles and functions. For academic staff, quality assurance was related to activities that supported the continuous improvement of teaching, learning and research including ongoing academic training, self-regulation and peer review. Middle managers typically associated quality assurance with systems for human resource management such as individual staff appraisals.

In the discussion of their roles and functions for quality assurance it was interesting to note the relative importance placed by staff within the University on the evaluation and improvement of teaching. The conclusion drawn was that on the one hand the quality assurance processes for research occurred largely outside of the University within disciplinary communities and as part of the PBRF. On the other hand, teaching evaluation was designed within the University and made operational within academic units. Consequently, the evaluation and improvement of teaching was one of the few remaining areas where academic staff, middle managers and senior managers could influence the design and implementation of appropriate quality assurance frameworks.

Important processes

The process of evaluation provides the foundation for quality assurance and improvement in higher education. Evaluation was defined as the systematic determination of merit and significance, and the literature indicated an array of factors (social, political, financial and cultural) that influenced evaluation processes. What became clear in the discussion of evaluation was that the processes and outcomes were context dependent. This point was reinforced in the case study findings where academic staff and middle managers identified numerous factors within the local context that needed to be taken into account when making judgements about 'quality' in the University.

A distinction emerged between evaluations conducted for quality assurance purposes, and those conducted to enhance teaching, learning and research. Quality assurance evaluations were those where the purposes, methods, and outcomes were largely pre-determined, and the procedures were based upon documented artefacts and quantitative data that could be examined externally. Audit and accreditation processes were identified as the mainstay of

these evaluations and the similarities and differences between the processes were discussed. One of the key differences was that predetermined criteria were applied for the purposes of accreditation, whereas quality audit was based on a more general model of financial accounting involving independent review and the supply of a public report. Discussion of audit and accreditation in the literature indicated that neither process was perceived to have had a significant impact on the improvement of teaching, learning and research within universities, and findings from the case study corroborated this point.

The emphasis on 'third-party assessment' within quality assurance evaluations reinforced the notion of quality-as-accountability and provided a mechanism for 'steering' (or controlling) education and research. External evaluations enabled the development and refinement of quality criteria to be carried out at a distance from a university thereby disconnecting the evaluation from those activities it was intended to assure, namely, teaching, learning and research. Case study participants within the University demonstrated their awareness of this aspect by drawing attention to the lack of alignment between quality assurance methods and measures and academic unit functions and goals. This separation between quality assurance evaluation and teaching, learning and research was also suggested in the metaphor analysis where quality assurance was identified as being in a stable state outside of, and unrelated to, the everyday work and experience of staff in universities.

The need for the 'auditability of information' that underpinned third-party assessment contributed to the value placed on quantitative performance measurement and standardised frameworks that could be applied in different organisations and compared across contexts. The views of government agency representatives in the case study were interesting in this regard because they noted that the focus needed to shift from easily measurable quantity indicators to more sophisticated tools that integrated qualitative and quantitative information. Nevertheless, their emphasis remained on finding the right measures for the evaluation of outcomes desired by the Government.

The use of standard procedures and frameworks for quality assurance evaluations were described in Chapter 5 as a linear and orderly representation of more general approaches to the evaluation of teaching, learning and research carried out by staff within universities. Their evaluations of these activities were based upon a process of critical inquiry involving the use of multiple methods and sources of information. Feedback received from academic staff, middle managers and senior managers in the case study strongly endorsed this point citing the need for measures that were quantitative and qualitative, formal and informal, and derived from multiple sources when making informed judgements about quality. One of the most prevalent methods of evaluation was peer review which, although subjective, enabled use to be made of the knowledge and expertise held by individual academics and within disciplines.

Approaches to the evaluation of teaching, learning and research (e.g., peer review, self-reflection, benchmarking) where also discussed in Chapter 5. Case study participants within the University placed the greatest importance on the evaluation of teaching as a means of improving student learning, and there was general agreement that methods of evaluating teaching needed to be expanded and linked more closely with understanding student learning outcomes. Information from the literature suggested that effective teaching and learning hinged upon the design and implementation of student assessment, so evaluations needed to include aspects of that process as well as indicators of student achievement, such as retention and completion rates. Context was the key factor because the assessment process was primarily constructed according to the experience of the staff member and practices within the relevant discipline. Approaches to the evaluation of research were typically well understood within the literature and by the case study participants. Research evaluation was based upon the scrutiny of research outputs according to both quality (through peer review) and quantity (e.g., numbers of publications and citations) measures.

Exploring the quality assurance systems of process using boundary critique affirmed what was potentially the most important finding within the Chapter: the design and assurance of quality assurance was divorced from the evaluation and improvement of teaching, learning and research. Requirements for external scrutiny of quality assurance information effectively constrained the design and application of a flexible evaluation processes that could change in response to a range of factors, including knowledge, expertise, and the local context. Moreover, quality assurance evaluations marginalised the importance of the qualitative and contextual information required to inform judgements of merit and significance by the practitioner. It is perhaps for these reasons that there is very little information regarding the impact of quality assurance on teaching, learning and research. Indeed, information from the present study suggested that existing approaches to quality assurance evaluation have little or no effect on the improvement of teaching, learning and research in universities.

To summarise, quality assurance processes within universities were found to be dynamic, need-based and reflective of the discipline, academic unit and staff expertise. Academic staff, middle managers, and to some extent senior managers, sought to amplify the variety of methods and measures used for quality assurance purposes. Conversely, government agencies (and to some extent senior managers) sought to reduce the variety of methods and measures used, while amplifying their significance. One of the critical requirements for quality assurance therefore lies in transparent information flows within and between the levels of the higher education system. However, this is likely to be constrained by the confusion discussed previously regarding roles and functions in relation to quality assurance. Viable Systems Modelling provides a means to investigate these issues further and identify areas for potential improvement.

Using VSM to diagnose quality assurance in the university system

The basic premises of VSM were described in Chapter 2. VSM is predicated on an organic model of organisations where ongoing viability can be determined by the presence and arrangement of five organisational systems: implementation, coordination, control, intelligence and policy (Figure 14). As a systems tool, VSM can be used to highlight whether the links between the organisational systems are present, and whether any of the systems are absent or poorly implemented. It is important to note that VSM is not intended as an alternative means to represent an organisational chart or hierarchy. Instead, it is used to describe how key functions within an organisation (and the broader environment of which it is a part) are discharged and connected. The overall purpose of including VSM at this point in the present study is to move beyond consideration of quality assurance structures and system levels to ascertain how (and where) the flow of information necessary for quality assurance and improvement in the university system could be improved.

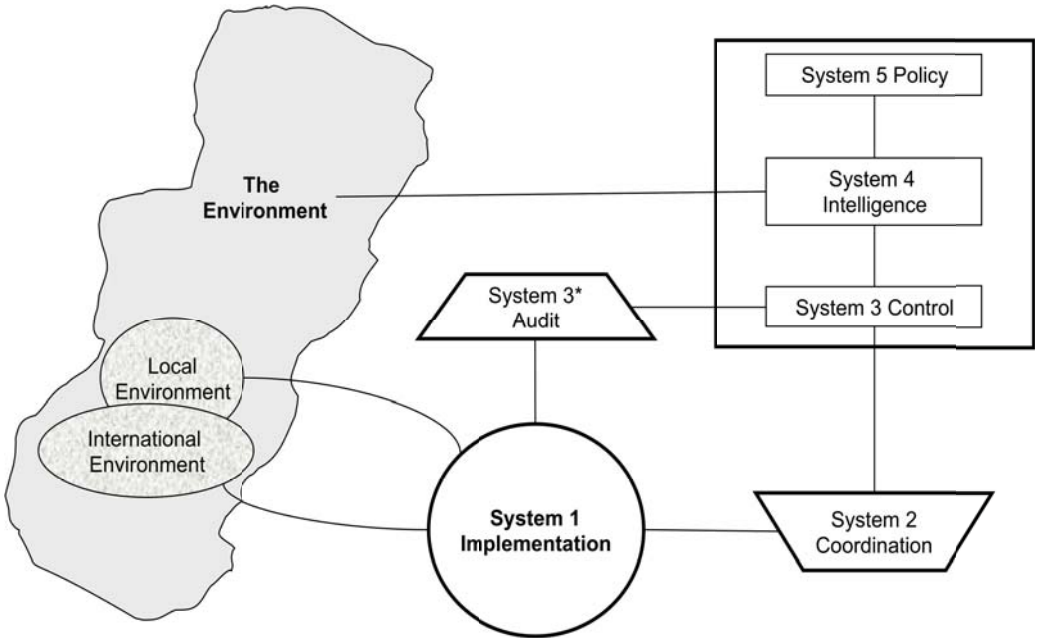

Figure 14: A basic representation of Beer's viable system model

A review of the literature identified two authors who used VSM to model the functional relationships guiding quality assurance in higher education. An early attempt by Flood (1993) mapped the teaching and research functions of universities showing how they were implemented by academic staff and coordinated within academic units, and by programme and research teams. The policy and control systems for quality were based within disciplines and the regulations and procedures that governed the appointment of staff, the entry of students, and the award of qualifications. Flood's drawing of the VSM provided no detail about the 'intelligence' function (System 4) except to note that it was present.

A later attempt by Houston (2007b) provided a detailed description of VSM applied to an academic unit within a university. His findings pointed to deficiencies in the control (System 3) and audit systems (System 3*) which were absent at academic unit level except

for informal discussions that occurred between individuals. Houston (2007b) observed that control and audit systems existed at other levels of recursion within the system (e.g., at university level) and were largely driven by financial and regulatory requirements, and the staff promotion procedures. The combination of case study findings and information from the literature presented in Chapters 4 and 5 of this thesis provides the basis for the VSM diagrams presented in Figures 15 and 16. Building on the work of Flood (1993) and Houston (2007b) the VSM diagrams are constructed according to two levels of recursion – one for 'a university' and another from a 'university sector' perspective. These levels of recursion reflect the basis of design and the locus of expertise for quality assurance in higher education identified in Figure 13 (p. 164).

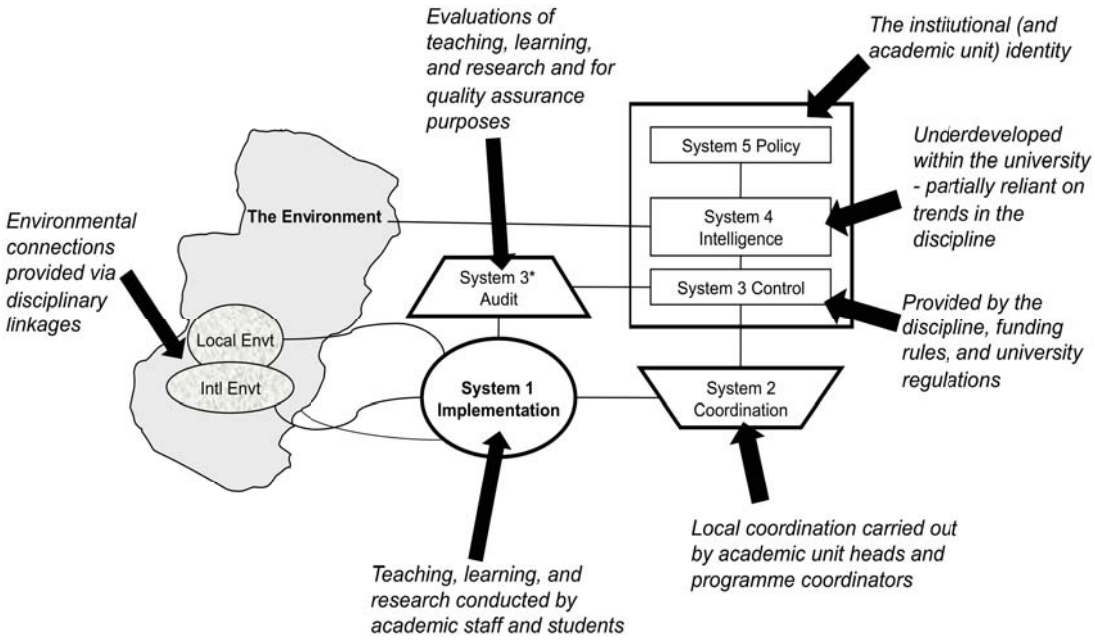

Figure 15: VSM diagram of a university at the first recursion of the higher education system

As described in Chapter 4, the purpose of a university is to enhance learning through teaching and research. This function is performed by the academic staff (and students) of universities positioning them as System 1 (implementation) of the VSM diagram for a university (Figure 15). Coordination of these functions is provided at a local level by heads of academic unit and programme coordinators. The role and function of the discipline is especially pertinent as it links teaching, learning and research to the local and international environment in addition to providing a control function alongside funding and regulatory requirements. The links between the control system (System 3) and the audit system (System 3*) are therefore strong where they align with disciplinary elements (i.e., with the use of self-reflection and peer-review for the evaluation of teaching and research), but would tend to be weaker for the financial and regulatory aspects which do not provide specific information about teaching or research quality. Consequently, the essential links between the coordination, control, audit and implementation systems within universities are discipline-based, with financial and regulatory requirements controlling accounting and legal

aspects across multiple systems of implementation. These links share particular implications for the quality assurance system within a university which maps onto the control and audit functions. It suggests that quality assurance needs to be aligned with teaching, learning and research *within disciplines*, and be adaptive enough to handle a variety of evaluation methods and sources implemented in System 1, and fed through to System 3 via System 2. It also suggests that preoccupation with the audit and control of the financial and regulatory aspects of System 1 has the potential to undermine the long-term viability of the 'real' units of core activities (teaching, learning and research) as time and effort is directed away from them toward compliance with these secondary (albeit important) elements. As observed by Beer, emphasis on secondary elements can improve the achievement of the organisation in terms of what is reported, but this is at the expense of its longer-term capability (1981).

Beer (1981) described System 4 (Intelligence) as "the biggest switch of the whole organisation" (p. 135). System 4 is responsible for the continual monitoring and capture of pertinent information from the environment, combining it with essential information from System 3, and transferring the important aspects upward to System 5 and downward to other parts of the organisation via System 3. Contrary to practices in many organisations, System 4 is not meant to provide an aggregate report on existing activities, but to use information to create a sustainable future for the organisation (Beer, 1981). The intelligence system in universities is broadly captured by planning processes described as involving analysis of the internal and external work environment in order to align goals and functions accordingly (Seymour, Kelly & Jasinski, 2004; Shah & Skaines, 2008). However, in their analysis of recommendations from the academic audit reports of Australian universities Shah & Skaines (2008) found that a majority of universities needed to improve their planning processes. They observed a lack of alignment between operational and strategic plans, allocation of resourcing for the achievement of initiatives, and effective systems for evaluation and feedback (2008). Indeed, when prompted, University staff in the case study were positive about strategic planning as a process, although one of the senior managers noted it was an area that could be improved in the University.

Based upon these observations and the information in Chapter 4, the intelligence function within universities appears to be underdeveloped. It should be noted that the frameworks provided by disciplines for knowledge creation, preservation and transmission have the potential to contribute to the intelligence function described by Beer (1981), although their links to System 3* and System 5 are tenuous. In any case, the ability of a university as a viable entity to recognise and implement changes informed by factors within the environment, and in relation to the institutional identity, is constrained by funding and reporting requirements at the next level of system recursion. Figure 16 depicts this recursion of the viable system in which the university is now positioned as the 'implementation' element System 1. At this level of recursion, a number of inconsistencies are revealed which, according to Beer's model, threaten the viability of the total system.

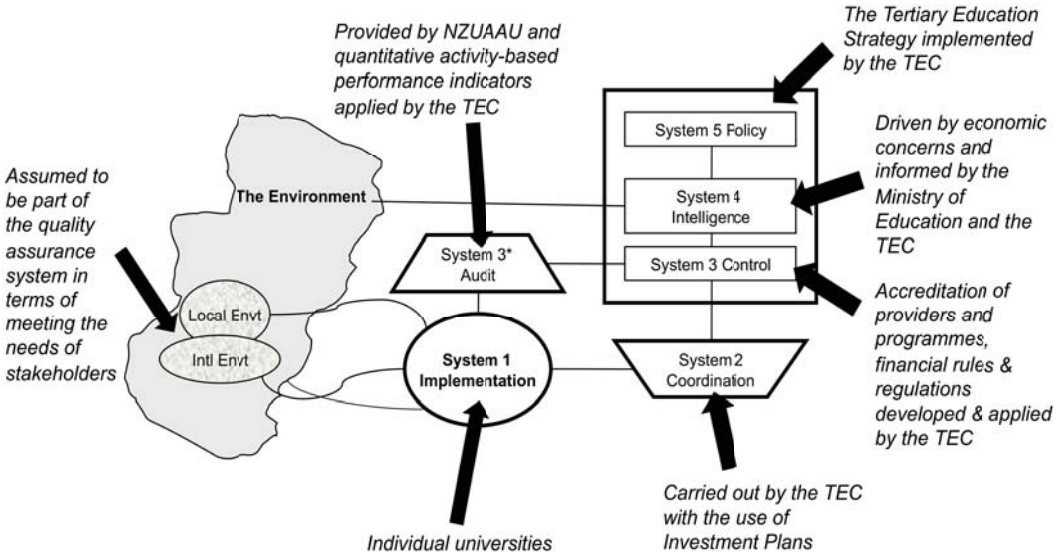

Figure 16: VSM diagram of universities in the New Zealand tertiary sector at the second level of recursion

One of the first observations that could be made in relation to Figure 16 is that the function of the discipline is almost entirely absent from the model at this level of recursion. This hiatus has a number of flow-on effects for the connections between individual universities and the tertiary sector in that the systems of control, audit, implementation and intelligence are not related except via financial rules and other regulatory requirements. It is also noteworthy that the role and function of the NZUAAU—conceived as a mechanism for review and improvement of teaching, learning and research in universities—is ineffectual as it neither penetrates beyond Systems 3-5 within universities, nor does it 'speak the same language' as a university's System 3*. In many ways, the NZUAAU could be viewed as one of the Jackson's "common system faults" (2000, p. 165) as it constitutes an irrelevant or additional feature that has the potential to hinder the functioning of a university as a viable system. Another deficiency in the control and audit system arises from the contravention of one of Beer's principles of control which requires that System 3 should be part of the implementation system (System 1) rather than "something stuck on to a system by a higher authority which then accords it managerial prerogatives" (1981, p. 25). It is useful to observe that the role of NZVCC in the accreditation of university programmes by CUAP is entirely consistent with Beer's principle, whereas the role of the TEC and the NZUAAU are not.

Another observation that can be made about the VSM diagram for universities in the New Zealand tertiary education sector is that the functions of the TEC span all of the management functions (policy, intelligence and control) as well as audit and coordination. The main implications of this feature are twofold. First, in establishing functions across Systems 2, 3, 3*, 4 and 5 the TEC could be viewed as autopoietic; that is, an organisation that is an autonomous entity which repackages and recontextualises resources from the environment

for its own purposes. In his discussion of autopoiesis Beer (1979; 1981) observed that all viable systems dedicated some time to self-preservation and self-production to ensure the ongoing survival of the organisation to pursue its primary purpose(s). However, the autopoietic part of the organisation is confined to its implementation system (System 1). Other elements of the System (Systems 2-5) should not exhibit autopoietic behaviour because they exist solely to serve System 1. If autopoietic behaviour is found in Systems 2-5 the entire viable system is said to be "pathologically autopoietic" (Beer, 1981, p. 338) because competing purposes advanced in Systems 2-5 will increasingly consume resources previously directed to the intended purposes implemented by System 1.

The tendency toward autopoiesis, evident in the activities of the TEC across Systems 2-5, is not uncommon in relation to government agencies (Beer, 1981). However, in relation to the New Zealand tertiary sector it does, according to Beer (1979; 1981), compromise the viability of the entire system at all levels of recursion. The reason for this is that while consensus exists regarding the purpose of System 1 (learning through teaching and research), the purpose of the TEC as a viable, self-preserving, and self-producing system in its own right is unclear. The implication is that resources previously directed toward System 1 are increasingly consumed by Systems 2-5, which could result in the creation, preservation and transmission of knowledge for its own sake and for the benefit of society being shifted into the creation, preservation and transmission of knowledge *about* the system. A similar line of argument could be presented in relation to the quality assurance system which, as discussed in Chapter 5, is self-referencing and self-replicating to the extent that it too exhibits autopoietic behaviour.

Systems 4 and 5 and their connection are also problematic at the sector level. The broad focus of the intelligence function is constrained by an economic outlook which is normally short-term, and the political cycle of party elections every three years. Consequently, the purpose of System 4 at the sector level is to identify short-term levers, based on political and economic factors, that can be implemented by System 3 using financial and regulatory control mechanisms. In relation to System 5, Beer (1979; 1981) noted that it should embody the primary purposes of the whole system to sustain and advance its survival. However, given the disconnects between the VSM diagrams at sector and university levels, together with the tendency toward autopoiesis of Systems 2-5 at sector level, the question could be posed: of all the activity occurring to manage, coordinate, and quality assure tertiary education in New Zealand, how much of it has anything to do with the delivery of teaching, learning and research or the improvement thereof?

PROBLEM REDEFINITION

The discussion of 'problem setting' provided the context for quality in higher education which originated in business organisations and was applied to education for (largely) political and economic purposes. 'Problem structuring' provided the means to examine the nature and purposes of universities, and quality assurance, within the particular context of

New Zealand. Findings from the case study were integrated with information from the literature and illuminated by the application of systems tools. Key functions and processes operating within the university system and in relation to quality assurance were identified, and VSM applied to ascertain how the functions and connections between them could be improved. So what does this all mean for quality assurance in universities? What the present research has provided is a means of redefining the problem(s) of existing quality assurance systems; more specifically, the purposes, roles and functions, evaluation methodologies and terminology each of which are described following.

Questions of purpose

Quality management in higher education originated from a desire to enhance the transparency, standardisation and measurable outputs of universities. In other words, to make them more accountable. The basis for this accountability was financial control. It is therefore not surprising that the driving force remains economic with quality assurance used as a political weapon wielded by groups at different levels of the university system for funding and reputational purposes.

The latent (or perhaps manifest) consequences of this approach have been differential esteem accruing to particular activities likely to have short term financial gains versus those that serve broader social functions, preserve institutional autonomy, and recognise the diversity of disciplines, values and processes that are defining features of universities. Such features do not fit neatly within a financial framework of accountability and the social functions of universities are demeaned as a consequence. Indeed, consistent with the findings of Houston (2007b), the participants interviewed in the case study were largely silent on the social role of the University as 'serving the community' or acting as 'critic and conscience of society'.

It is important to recognise that there are two schools of thought operating within the sector: (i) quality assurance as accountability, and (ii) quality assurance as a means to improving teaching, learning and research within universities. If we were to revisit the teachings of the quality management gurus such as Deming and Juran, we would have to accept the former agenda is invalid. This does not mean that accountability is not an important requirement for universities and their staff. Indeed, one of the distinctive features of the New Zealand context is that the interaction between institutional autonomy, academic freedom and accountability are clearly articulated within the Education Act (1989). What is important is that the accountability requirements—implemented through the performance reporting and funding framework—are simply that. They cannot accommodate the plethora of methods and measures necessary for improving teaching, learning and research in the pluralist environment and context of a university.

There are three possible implications of accepting that the requirements for accountability and those for quality assurance are different which provide an opportunity to review the former and advance the latter in a meaningful way. First, we must review our understanding

of ‘accountability’ and acknowledge the deficiencies of existing systems which largely purport to advance accountability, but provide little more than a description of current activities. Secondly, we must confront the autopoietic nature of the quality assurance regimes operating outside universities and address the tautological nature and superficiality of quality assuring the quality assurance systems. Finally, we must reform quality assurance within universities in a manner that takes account of diverse identities, disciplines, methods, measures and approaches, and bridges the gap between ‘assurance’ and ‘improvement’.

Existing approaches to quality assurance also run counter to the promotion of ‘advanced learning’ that is an important function of universities and have the perhaps unintended consequences of perverting ideals about the interdependence of teaching and research. The implementation of separate funding and accountability requirements for teaching and research administered through the performance-based research fund and the newly established performance based teaching component is particularly damaging in this regard. The teachings of the quality management gurus reviewed by Hackman & Wageman (1995) were clear about linking funding to performance—do not do it, unless you want to undermine collective efforts and encourage meeting (rather than exceeding) targets.

Roles and functions

Lack of agreement and understanding regarding the roles and functions performed by individuals and groups at different levels of the university system is a current failing of existing quality assurance systems. Academic and support staff within universities have the responsibility *and capability* to improve teaching and learning, including the provision of documents or other artefacts that could attest to their commitment in this area (i.e., via the methods and measures used for internal accountability purposes). The capability aspect is critical because only staff within universities can use the evidence obtained for quality assurance purposes to improve teaching and learning. The conduct and improvement of research is arguably different in that it requires direct interaction with a wider array of knowledge created, transferred and preserved within disciplinary networks beyond the university’s boundaries.

Unfortunately, these (relatively) simple assertions appear to be absent from the quality assurance vernacular. Instead, using the New Zealand context by way of example, there is a plethora of service agreements, mission statements and policy documents that specify the role and function of TEC, the NZUAAU, CUAP and the NZQA, all of which relate to the *performance reporting and accountability framework* for New Zealand universities, but none of which explicitly acknowledge the role and function of the universities and their staff for the quality assurance and improvement of teaching, learning and research. Instead, quality assurance is distanced from the very activities it is meant to assure, and the expertise and authority for its implementation is positioned outside universities.

Potentially of greatest importance is the complete lack of attention paid to the role and function of the discipline in the setting and maintenance of standards for teaching and research in particular areas. Comparing the roles and functions within the higher education system, and those in relation to quality assurance revealed that the discipline was distinguished by its applicability to both. In other words, the discipline was the only structure that demonstrated an inherent (as opposed to additional or invented) capacity to bridge quality assurance and improvement in teaching, learning and research. It does this through the initial and ongoing training of staff and students in the disciplinary issues, methods and methodologies, and the development, evaluation and communication of knowledge—through publications and peer networks—across universities. To not take account of the discipline in a quality assurance system is a serious flaw, but an understandable one considering that the purposes are primarily related to financial control, and the intended beneficiaries are not directly involved in education processes.

There is also a need to recognise the pivotal role played by 'the university' in the design and development of a quality assurance framework that effectively mediates the requirements of external agencies with the needs of staff, students and disciplines. This includes attention to collegial and managerial decision-making, human resource management, and staff development opportunities all of which are key processes that support the advancement of institutional and academic unit identities which provide the environment for teaching, learning and research.

Evaluation methodologies

Evaluation provides the basis for quality assurance and quality improvement. However, significant differences exist between evaluations used for the purposes of quality assurance and those used for more general purposes of understanding and improving teaching, learning and research. The need for evaluations to be 'auditable' by persons outside universities places significant constraints on the approaches taken and the methods used. Quality assurance evaluations are therefore characterised by the prevalence of standardised frameworks, and the application of criteria and measures that do not take account of the particular context in which the evaluation is applied. In contrast, evaluations of teaching, learning and research conducted for the purposes of understanding and improvement are flexible and adaptive to accommodate a range of contextual factors and possible outcomes. Unfortunately, these developmental and dialogical approaches, often applied within disciplines and academic units, are marginalised in an environment where value is placed on quantification and external scrutiny.

Terminology

There is little or no agreement regarding the meanings of the terms accountability, quality assurance, quality improvement and quality enhancement. Indeed, different understandings of 'quality' and 'improvement' exist. Given this diversity and its context dependence means that the possibility of deriving formalised definitions of the terms is slim. Nevertheless,

there would be some advantage in refining our understanding of the relationships between them. I propose that defining quality assurance as the methods and measures used for internal and external accountability purposes goes some way to highlighting the potential differences between the two approaches, and relates quality assurance to accountability in a manner that does not suggest a direct relationship with 'improvement'. Defining the requirements for 'quality improvement' as 'quality assurance', plus a process of critical inquiry/research enables quality assurance to be linked directly to quality improvement; moreover, it reinforces the idea that the relationship is incomplete without consideration and analysis of the information in the context from which it is drawn.

DISCUSSION

As noted at the outset, quality is a 'wicked problem' and a simple solution to problems of reconciling quality assurance with the improvement of teaching, learning and research in universities is unlikely. However, the present study has gone some way to 'redefining the problem' and focusing attention on the issues that lie at the heart of authentic quality improvement in ways that could inform the improvement of quality assurance in higher education.

The following discussion is presented in two parts. The first part reflects on the research objectives and provides commentary on the extent to which they have been achieved. Areas for future and further research are highlighted and the significance of the findings in the context of previous work in the area is discussed. The second part extends the self-reflection that has been an integral part of the present research with a discussion of 'researcher competence' and the extent to which this constitutes a 'real systems study'.

Reflection on the research objectives

I began with a premise that the exploration of quality (broadly defined) in the university system required an understanding of universities (people, purpose(s), values, structures and processes) and an appreciation of quality management ideology, tools and methods in order to reconcile their fit. The overall approach taken was to examine the roles and functions of the people at different levels of the university system in New Zealand, and explore the structures, processes and power relationships that operated in this context, informed by related literature.

The first objective of the research was to investigate, compare and contrast perceptions of academic quality at different levels of the university system including the government, university senior management, university middle management and academic staff. Investigation of views was achieved with the use of interviews conducted with representatives of New Zealand government agencies with responsibility for tertiary education policy and strategy, and academic staff, middle managers and senior managers within a 'typical' New Zealand university. Their views of 'academic quality' and of 'the

university' were compared and contrasted with each other, and with information reported in the literature.

The finding that staff within the University did not associate quality assurance with the improvement of teaching, learning and research was consistent with other studies of academics' perceptions of quality (Newton, 2001; Jones et al., 2005; Cheng, 2007), and analyses of quality in higher education (Harvey, 2009; Harvey & Williams, 2010b). Indeed, negative perceptions of external versus internal quality assurance processes provided by University staff in the case study were also observed by Cheng (2009). Furthermore, her finding that academic staff viewed audit processes as an affront to their professionalism (2009) was similar to those of this study where quality assurance was viewed as undermining the commitment of staff to the continuous improvement of teaching, learning and research.

The University participants in the case study were more likely to discuss academic quality in terms of the 'totality of the environment', a response which had also been observed by Horsburgh (1999) and Houston (2007b). General dissatisfaction with the existing approaches to quality assurance such as audit, accreditation and performance indicators implemented for accountability purposes was a common theme in the New Zealand case study, and also in the literature (Harvey, 2002; Stensaker, 2003; Anderson, 2006). The present study indicated that this was a consequence of accountability requirements which were overly simplistic, standardised, and imposed from outside universities for purposes unrelated to the improvement of teaching, learning and research. Similar conclusions have also been reached by other authors (Harman, 1998; Newton, 1999; Vidovich & Porter, 1999; Inglis, 2000; Shore & Wright, 2000; Harvey & Newton, 2004; Stensaker, 2007). However, I would assert that a major difference between those studies and the present one has been the inclusion of a substantive analysis of the context in which quality assurance has been applied. More specifically, the purposes, processes, and roles and functions of the people involved in university education. This approach has provided crucial information about the importance of the disciplines, the value placed upon collegial and managerial decision-making, and the stability of higher education purposes. It has also extended knowledge about the New Zealand tertiary education sector, identifying similarities and differences between its national policy framework and university operations and those in other contexts.

The second objective of the research was to use systems thinking to surface assumptions regarding the nature and purposes of quality in universities, and to explore and problem solve any conflicting perceptions. This was a relatively novel approach, despite the suggestion by some authors that quality is 'systemic' (Harvey & Green, 1993; Horsburgh, 1999; Schmidtlein, 2004; Jones et al., 2005) very few have applied systems thinking to quality in higher education (Flood, 1993; Houston, 2007a; 2007b) and only Houston used a critical systems approach. However, it is important to note that the present study differs from that of Houston (2007b) in two important ways. First, the 'system in focus' in this study was 'a university' whereas Houston examined an academic unit. A second difference is in the research design which in my case uses the relevant literature to 'sweep in' different

perspectives of the system in focus and systems windows as a framework for analyses of the nature and purposes of quality assurance and those of universities. The critical systems approach, and especially the application of systems tools, was a crucial factor in generating a number of findings which may have been observed in the literature, but not necessarily directly or demonstrably linked to the quality assurance systems and procedures.

In relation to roles and functions within the university system, the role of the discipline as central to the development, maintenance and enhancement of standards for teaching, learning and research was identified, as was its absence from existing approaches to the accountability, audit and accreditation systems applied to universities. These findings have similarities to those of Becher & Kogan (1980), Henkel (2000), and Becher & Trowler, (2001), but provide more detail in terms of the existing and potential contributions of disciplines to quality assurance and improvement. The application of Beer's VSM (1981) showed how disciplines provided essential links between teaching, learning and research, and the local and international environment. Disciplines also contributed to the control of these activities and had the potential to assume a much greater role in relation to the audit and intelligence functions of universities.

In his use of VSM, Houston (2007b) found that the audit and control systems at academic unit level were underdeveloped whereas the VSM map of a university based upon the information in this study revealed that these systems were primarily discipline-based. Case study interviews with middle managers and academic staff provided information to suggest that although the audit and control systems were indeed informal, they comprised multiple methods and sources of information that contributed to a dialogical approach to the ongoing evaluation and improvement of teaching and research. Houston (2007b) also observed that the audit and control systems at other levels of recursion within the system (i.e., the university and sector levels) were primarily based on financial, regulatory and human resource procedures. The use of VSM for this study affirms that finding – especially at the sector level where the audit and control systems are not directly linked to the implementation of teaching, learning or research.

The use of systems windows within a critical systems approach was instrumental in clarifying the roles and functions of other elements in the university system. In particular, the seemingly expanding role of government in the determination of the purposes, procedures and measures of quality was identified, as it has been by other authors (Vroeijenstijn 1995; Barnetson & Cutright, 2000; Schmidtlein, 2004; Bradley, 2005; Blackmur, 2010). However, this study extends previous research with observations about what the role of government (and government agencies) should be in relation to quality assurance namely, the specification of the external *accountability* framework with which universities must comply. This point was illustrated using evidence from the New Zealand context which showed that quality assurance and accountability were conflated, and while the responsibility for quality improvement lay with universities, ownership of the quality assurance system rested primarily with government, audit and accreditation agencies. Of

particular interest was a discovery arising from the use of VSM that the TEC was allocated responsibilities related to the policy, intelligence, control, coordination and audit functions in order to repackage and recontextualse information from other parts of the system for its own purposes – a phenomenon known as autopoiesis. This was identified as a threat to the viability of universities as autonomous and self-organising entities because the purposes of the TEC would conflict with those of a university and increasingly consume resources that could be allocated to them.

One of the most illuminating systems tools was application of boundary critique which was pivotal in surfacing a number of the underlying issues and assumptions operating in the university system. The boundary critique confirmed observations by other researchers that existing measures of success within the higher education system not only prioritised economic outcomes, but marginalised the social functions of universities (Inglis, 2000; Becher & Trowler, 2001; Wolf, 2002; Henkel, 2005; Goldspink, 2007; Lock & Lorenz, 2007). The present study extended these findings by identifying the pivotal role of universities in mediating the external influences, although constraints that operated in the broader environment hindered universities in fulfilling this function. These constraints were associated with the prevalent use of funding and reputation as means to ensure compliance with the requirements and procedures of agencies external to universities. The use of quality assurance as a means to gain and sustain power over universities has also been noted in other studies (Marginson, 1997; Brennan & Shah, 2000; Morley, 2003; Harvey 2004; Brunetto & Farr-Wharton, 2005), but detail regarding the locations and directions of these power relationships in the context of the higher education system as a whole has not. In this regard, the map of power relationships and means of control that form the basis of quality assurance in higher education (Figure 12) is an important contribution to knowledge in this area.

The use of boundary critique also highlighted issues relating to the democratising discourse of 'stakeholder' involvement often included in the rationale for quality assurance systems. Varying conceptions of the 'stakeholders' in higher education exist and have been defined broadly (e.g., society), specifically (e.g., students) or not at all. This study provided a comprehensive list of stakeholders (Table 1) and, assisted by the process of boundary critique, identified the extent to which each of the stakeholders was involved in, or affected by, quality assurance in universities. Findings indicated that 'key' stakeholders such as students, academic staff and disciplines were 'affected' but remained largely uninvolved in the quality assurance system. Instead, the real beneficiaries of the quality assurance system were shown to be agencies and groups outside universities or at university level. This finding reinforced the perceived disconnection between quality assurance and the purposes of universities (teaching, learning and research).

The final objective of the research was to provide insights regarding an approach to quality assurance that recognises the nature and purposes of universities. The findings from the present study indicate that existing approaches to quality assurance and improvement are flawed in that they do not provide the information necessary for either assurance or

improvement. This gap was evident in the responses from participants in the case study, and also in information pertaining to the quality assurance and monitoring systems in New Zealand (Cabinet Business Committee, 2006; Houston, 2007b). Significant deficiencies in existing approaches to quality assurance have also been observed by other authors and in relation to a variety of contexts around the world (Vroeijenstijn, 1995; Bowden & Marton, 1998; Harman, 1998; Horsburgh, 1999; Harvey & Newton, 2005; McPherson & Shulenburger, 2006; OECD, 2008; Harvey, 2009; Gallagher, 2010; Houston, 2010; Singh, 2010).

Achievement of this objective is challenged by the dominance of the perception of quality-as-accountability and its associated performance and reporting requirements that have more to do with financial and regulatory compliance than the teaching, learning and research functions that are the raison d'être of a university. There are clearly a number of issues to be addressed, and this study has provided insights into understanding the 'system corrections' that need to be made. Perhaps the most important finding has been that there is a need to clarify the relationship between quality assurance, accountability and quality improvement. A global definition of 'improvement' or 'quality' is not possible given the diversity of people, values and activities in universities, nor it is necessary if there is acceptance that quality improvement is a way of thinking, acting and doing. However, if there is to be a distinction between quality assurance as a means of improving teaching, learning and research, and quality assurance as audit, accreditation and compliance with financial and regulatory requirements, then an operational definition would be useful. It is proposed that the following general definitions could provide the basis for future discussion and research in the area:

> *Quality assurance comprises the methods and measures applied by external agencies to universities for the purposes of accountability, and the methods and measures used within a university for the evaluation of teaching, learning and research.*
>
> *Quality improvement involves a process of critical enquiry that utilises the artefacts of quality assurance for the purpose of continually improving teaching, learning and research.*

I also suggest that these definitions go some way to clarifying the roles and functions of various elements within the university system. For example, responsibility for the evaluation and improvement of teaching, learning and research should reside within universities, not with agencies external to them. Furthermore, the definitions affirm the role of agencies outside universities in the development and application of an accountability framework and makes clear it is only one component of the quality assurance system. The definitions also provide scope for a range of approaches to the evaluation and improvement of teaching, learning and research to be used according to the needs and requirements of individuals, disciplines, academic units and universities. Finally, the standardisation and comparability of information provided for accountability purposes can be accommodated, but should not be

conflated with 'quality' as an academic staff, academic unit, disciplinary and university-level concern.

Implications

Recognising the difficulty of challenging the entrenched quality assurance processes promulgated by agencies external to universities, the present study essentially argues for a more reflective approach to quality assurance and improvement within universities. This is likely to require an educative process whereby the limitations of existing forms of accountability-based quality assurance are recognised, and a more informed understanding of the relationship between quality assurance and quality improvement is encouraged. Such an approach among those directly involved in the management and delivery of higher education would be akin to the core themes of CST whereby dialogue regarding quality assurance is informed by:

- *critical awareness* of the context for quality assurance which is currently driven by requirements for external accountability and economic outcomes;
- a transparent *focus on the improvement of teaching, learning and research* first and foremost; and
- commitment to pluralism within the university both in terms of diverse disciplines and the contributions they make to advancing learning at individual and collective levels, and in the recognition of diverse methods and measures that support the critical enquiry needed to enhance awareness and foster improvement.

Critical awareness of the context, commitment to pluralism, and an unequivocal focus on improving teaching, learning and research have particular implications for the functions of academic leaders in the university, especially those in places of positional authority. Heads of academic units and senior managers should be provided with leadership and development opportunities to examine the issues and challenges associated with the meaningful evaluation of teaching, learning and research versus the more superficial methods and measures primarily used for external accountability purposes. In particular, careful consideration of the potential benefits (and costs) of engagement with external accreditation and audit processes should also be observed in terms of their potential for improving teaching, learning and research within academic units and disciplines.

The importance of organisational structures cannot be overlooked because they influence the prioritisation and distribution of resources within the university, as well as the levels of engagement that occur among staff within and across disciplinary groups. Heads of academic units and senior managers should be cognisant of supporting the disciplinary affiliations of academic staff, and providing opportunities for them to engage with peers on matters relating to teaching, learning and research. Furthermore, rewards for success in teaching should be better aligned with those provided for research since both are core functions of a university.

Self-reflection

Reflecting on the thesis in terms of the analyses conducted and findings discussed there are a number of observations that I need to make in addition to those mentioned previously in the Self-Reflection sections in Chapters 4 and 5. I would first like to draw the reader's attention to two points in relation to the use of literature as a source of information for the study. First, I found it increasingly difficult to separate the case study findings from the information sourced in the literature. This merging may have resulted in some inappropriate generalisations made in relation to either account. Secondly, at the outset of the study (some years ago) there were boundaries placed around the literature search (e.g., articles with the keywords 'quality' and 'higher education' between 1980 and 2008 in selected electronic databases). However, these boundaries were extended via a process of 'threading' whereby salient points of authors cited in the literature were traced to their source. This threading continued until I believed I had reached the point of 'theoretical saturation' (Strauss & Corbin, 1988, p. 292) where no 'new' information was being discovered. Therefore, I must accept the possibility that there exists some seminal work in the area of quality assurance and/or higher education that may have been overlooked.

I believe it is important to note that in order to assess the validity of the assertions made in this Chapter, I re-reviewed the interview transcripts and the preceding Chapters to ensure that there was alignment between the issues discussed and the conclusions drawn. I regret that while much of the detail in the participant responses has been lost in the latter discussions, I believe the essence of their underlying issues and assumptions remains.

There continues to be a question around the values and perspectives I brought to the research and the extent to which they influenced the discussion of findings. Given my background and roles within a New Zealand university, a high level of familiarity with the problem context was an unavoidable artefact in the study. The trick, says Alvesson (2003), "is to get away from frozen positions, irrespective if they are grounded in personal experiences or shared frameworks". I have endeavoured to do this with an explicit statement of research premises, objectives and expected outcomes, together with the use of self-reflection. The critical systems approach has also been invaluable in providing an 'interpretative repertoire' that has encouraged me to review material from different perspectives and in various ways (Alvesson, 2003, p. 183).

It is also important to recognise that the purposes of the research are not only the stated research objectives, but also the more selfish motivation of attaining a doctoral degree for personal and professional advancement. Taking a moment to reflect upon the implications that this may have had for the research, and any subsequent publications, I have to admit that constraints were imposed. For example during the latter stages ('latter' equating to 'time left for completion') intended engagement with the participants subsequent to the completion of interviews was disregarded in favour of 'writing up' the dissertation so that it could be submitted 'on time'. In this respect my competence to carry out the intended research

procedures specified on the Information Sheet (Appendix 1) could be questioned. However, in the spirit of a self-correcting and self-limiting inquiry I chose to deal with this deficit by recognising its existence and aspiring to implement a broad interpretative repertoire. Furthermore, the thesis will be available for the participants to study if they wish.

On systems thinking and researcher competence

On the application of systems thinking, I believe that the critical systems approach and systems tools provided a very useful framework for the exploration of quality in universities and for surfacing important issues in a manner that can be followed. However, one of the fundamental questions surrounding the use of the critical systems approach is: does it constitute a 'real systems study'? To answer this question I referred to Jackson's constitutive rules for critical systems practice (2000, p. 393) and Midgley & Ochoa-Arias' criteria for assessing a systemic intervention (1999, p. 17-22) as a guide to my reflections on the issue. Their criteria are summarised in Table 22 together with my assessment of the alignment of this study with the criteria.

Table 22: What makes this a real systems study?

Criteria for judging whether the study was systemic	My assessment of alignment with the criteria
A focus on the improvement of problematic phenomena based upon the current and potential states of the system, and including information regarding how the potential state could be realised	The research began with an explicit statement of the research premises, objectives and expected outcomes. It sought to explore a real-world problem-context with the express purpose of identifying how the application of quality assurance approaches and methods in higher education could be improved. The argument evolved from an account of the current situation to discussion regarding the issues and areas to be addressed, and ideas regarding improvements could be achieved.
Multiple perspectives of the problematic phenomena are included, and creatively examined using a range of systems tools and boundary critique	Different perspectives of the problem of quality assurance and the context of higher education were compared and contrasted, and a process of boundary critique applied to surface the underlying values and assumptions that operated within the systems.
The analysis should include as much information as possible and people likely to be affected by an intervention should be involved as much as possible	The data informing the analysis was 'swept in' from a broad a range of sources involving the international literature and individuals with responsibility for quality assurance and/or its coordination and management in the New Zealand tertiary sector (given constraints imposed on my time and capacity). Although a number of potential sources were omitted, these have been acknowledged in my reflections on the study.

The reasons for the study are made explicit, and communicated to those involved	The reasons for the study, and the research objectives were made explicit in an information sheet (Appendix 1) that was provided to all participants in the case study.
Any claim that a systems methodology has been used (in this case, CST) must be substantiated with reference to the principles and guidelines for that methodology	The core themes of CST and the principles of TSI were identified in Chapter 3 and explicitly linked to the tasks, tools and processes of the present study in Table 8.
Choices made in relation to the use of systems methods and tools should be justified according to their alignment with the problematic phenomena and a commitment to pluralism	The choices made in relation to the research design and the alignment of systems methods and tools were made explicit in Chapter 3. The use of multiple methods and sources for the study was evidence of my commitment to pluralism.
The researcher should self-reflect on their role in the study especially in relation to the influence it may have had on the findings	As described in Chapter 3, self-reflection was explicitly noted amongst the research methods, implemented throughout the research process, and reported in the thesis.

Based upon the information in Table 22, I propose that the study could be considered 'systemic', but could it be considered an *intervention?* In defining 'intervention' Midgley included "acts of observation, acts of reflection, or acts of communication" (1995, p. 58). These observations are of particular relevance to the present study because the opportunities for direct intervention [in relation to academic staff, academic units, universities and government (!)] were limited by my position and status as a doctoral student.

Reflecting on my competence as a systemic researcher, I refer back to the propositions of Ulrich (2001) (Chapter 3, p. 44) and pose the questions: did I ask good questions and make good choices that enhanced understanding of quality in universities?; and did I provide practical recommendations for improvement within the problem context? I believe that I did and I have, the important point being that the work has provided alternative views of a phenomenon that has been in a stable state for some time, in the hope that it might generate different understandings that enliven the broader discourses on quality assurance and higher education. However, the judgement of my competence should rightfully rest with the reader!

CONCLUSION

The expected outcomes of the study were outlined in Chapter 1. The research was intended to provide insights into a clearer pathway for the application of quality management in the university system. What it has shown is that the existing approaches to quality assurance in universities have not followed the fundamental tenets of quality management to improve the core productive enterprise of the organisation. Instead, the approaches have been developed and implemented at a distance from the organisations and processes they were intended to

assure. Moreover, they have advanced in agencies outside of those organisations to the point where they now exist almost independently and for purposes that are no longer transparent to those involved or affected by them.

It was determined that the main issues to be addressed if the quality assurance system is to be improved are related to its purposes and use of terminology, clarification of the roles and functions of various bodies within the system, and a better understanding of the evaluation methodologies applied. In particular, explicit acknowledgment of the essential role played by the discipline was found to be a pivotal component that remained largely absent from audit, accreditation and performance reporting frameworks with which universities were required to comply. Similarly, the role and function of universities (and the individuals and academic units within them) was neither well articulated nor understood by a number of individuals and groups within the New Zealand tertiary education system. Given these findings, it is hardly surprising that quality assurance roles and functions are not aligned and that there exists a cumulative model of performance reporting and other accountability activity. If the quality assurance system is to be improved there must be acceptance of the work already undertaken and its 'messiness'. Improving teaching, learning and research is not a linear, standardised or tidy business. It is a complex process of developing individual and collective capabilities, taking risks, learning from failure and continuously extending success.

The present research also addressed a perceived gap in terms of defining academic quality in a manner that acknowledges the purposes of higher education and the complexity inherent in modern universities. Current approaches to quality assurance emphasise financial and activity-based accountability, aspects which have little to do with improving the quality of teaching, learning and research. By shifting the focus from 'defining quality' to articulating the relationship between quality assurance, accountability and quality improvement, standardised approaches such as audit, accreditation and performance reporting can be accommodated alongside the more flexible and adaptive approaches required for the improvement of teaching, learning and research within universities.

The present study also provided an opportunity to implement a novel research design grounded in Critical Systems Thinking and the use of systems tools. The 'success' of the design and analysis is something that the reader must determine, but from my perspective the use of systems thinking was successful in that the research objectives were achieved and the pathway to their achievement was both challenging and rewarding.

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Appendix 1: Information Sheet sent to the Research Participants

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The Problem with Quality in Higher Education (Working Title)
A Study Conducted for the Award of a PhD (Education)

Information Sheet

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RESEARCH OVERVIEW

While there is general agreement about the principles, approach and methods required for quality assurance in service and manufacturing contexts, the transferability and applicability of these industrial management concepts to institutions of higher education has rarely been questioned. Empirical studies on academic views of quality are scarce, although there is evidence to suggest that political, economic and academic perspectives of higher education aims and goals differ. This study will investigate the meaning of quality in higher education in a way that captures the complexity of the context and takes account of multiple (and perhaps conflicting) perspectives, purposes and requirements. The investigation will be conducted as a case study of a 'typical' New Zealand university in the context of the New Zealand Tertiary Sector—exploring systems of process and systems of structure underpinning existing approaches to quality management. Perceptions of academic quality will be drawn from a variety of participants, both within, and outside the university in order to compare and contrast their perspectives with published literature on quality in higher education and traditional quality philosophy.

RESEARCH OBJECTIVES

1) To use case study methods to investigate, compare and contrast perceptions of academic quality procedures and processes at four different levels of the higher education system—i.e., the government through representatives involved in sector steering, the university executive through senior management, 'middle management' in the form of department or faculty heads, and academic staff.
2) To use a Total Systems framework[9] (a reflective approach that facilitates creative solutions) to examine and problem solve any conflicting approaches and perceptions.

[9] A more complete account of the problem conceptualisation and methodological approach is presented in Paewai, S. (2004). The Problem with Quality in New Zealand Higher Education. *Paper Presented at the NZARE Conference, Wellington, New Zealand, 24-26 November 2004 and available from the researcher.*

3) To develop an approach to quality management and quality assurance that recognises the nature and purpose of universities.

RESEARCH PARTICIPANTS & CONFIDENTIALITY

The participants, together with the reasons for selection and sampling information are presented in Table 1. In some cases, the selection of individuals invited to participate in the study has been carried out on the basis of suggestions made by the Vice-Chancellor/Chief Executive Officer or delegate. Individual participants will not be identified in any other manner save for the broad groupings outlined. In addition, the research site(s) will not be named in any reports or publications arising from the research.

Participants	Reason for selection	Sample	Sample rationale
Academic staff	Have primary responsibility for the core activities of a university in terms of research, teaching & service	Approximately 10 academic staff who are members of the University's Academic Board, or familiar with the University's academic approval and review processes.	Staff representatives who have direct involvement with the academic approval and review processes are likely to have a wider understanding of sector issues, University processes and quality assurance requirements.
University middle management (department or faculty heads)	Responsibilities in relation to the local coordination and management of research, teaching & service	Approximately 5 department or faculty heads at the University	The sample should provide adequate representation while maintaining a manageable study.
University senior management	Responsibilities in relation to the achievement of University-wide goals in relation to research, teaching & service	Approximately 3 members of the senior management team of the University	The sample will provide adequate representation of perceptions from people who maintain a university-wide perspective.
Tertiary education sector representatives	Responsibility for implementing sector-wide strategies and goals including advice on policies, priorities and sector performance	Approximately 3 members of an organisation affiliated with sector performance	The sector representatives' sample will provide adequate representation of perceptions from people who maintain a sector-wide perspective.

Table 1: Research Participants and Selection Rationale

RESEARCH PROCEDURES

Phase one of the research will involve the collection of participant perspectives using individual semi-structured interviews of up to 90 minutes to explore questions such as: what is a university like; how would you define quality in terms of what a university does; what impact have quality audits and compliance measures had; and what do you think could be done to improve quality at a university. In the second phase of the research, a series of 90 minute individual interviews or focus groups (that which is most convenient to the participants) will be conducted to share the outcomes of the research, and problem solve any issues arising from those outcomes.

The interviews will be taped and transcribed by the researcher. Information obtained during the interviews will be analysed using a grounded theory approach to compare and contrast

participant perspectives, and an appropriate qualitative data analysis tool such as NVivo may be used to facilitate the analysis process.

All tapes, transcripts and notes relating to the participant responses will be securely stored by the researcher during the course of the study, and destroyed at the conclusion of the research unless otherwise requested by the participants.

PARTICIPANT'S RIGHTS

Participation is voluntary and all who choose to take part in the study have the right to: ask any questions about the study at any time; decline to answer any particular question; withdraw from the study at any time during the interview process; and access a summary of the project findings when it has concluded. Participants also have the right to request that the tape recorder be turned off at any time during an interview. Participants provide information on the understanding that their name will not be used unless their permission is given to the researcher.

This project has been reviewed and approved by the Massey University Ethics Committee, Wellington Application 05/05. If you have any concerns about the ethics of this research, please contact Professor Sylvia Rumball, Chair, Massey University Campus Human Ethics Committee: Wellington telephone 06 350 5249, email humanethicswn@massey.ac.nz.

Appendix 2: Data Tables Forming the Basis of the Boundary Critique for the Nature and Purposes of Higher Education

Key: information from the expanded dataset is in green text; information related to the New Zealand context is in orange text; and information drawn from the case study findings is in blue text.

Boundary Categories and Definitions Forming the Value Basis for Higher Education

Boundary Categories	Boundary definitions identified in Chapter 4
Beneficiaries of the higher education system	Knowledge for its own sake Middle managers noted that disciplines benefited from knowledge creation, preservation and transmission. Individual learners Academic staff perceived teaching and research as both a means and an ends. Teaching and research provided the means for a challenging, interesting and motivating career. As an ends teaching and research had a range of beneficiaries—specifically including students and disciplines—but extending beyond them to other areas of society in ways that are not necessarily determined in advance. The New Zealand Education Act specifically linked higher education to the development of intellectual independence. Society Development of community learning was noted in the New Zealand Education Act (1989) and university education was also associated with benefits for New Zealand and its population. Senior managers referred to the beneficial role that universities played in relation to society. The national economy and the labour market Observed as being the primary beneficiary by representatives of government. Middle managers within the University identified external funding agencies (often linked to government or industry) as a beneficiary of higher education along with professional organisations (e.g., those established to support medicine and engineering).
The purposes of higher education pursued to meet the needs of beneficiaries	Knowledge creation, preservation and transmission Universities maintain, advance and disseminate knowledge (Education Act, 1989). Respondents at all levels of the University (individuals, middle managers, senior managers) and representatives of government identified teaching, research and their integration as the purpose of higher education for the advancement of knowledge, for the betterment of society, and for the betterment of private

	individuals (students & academic staff) and the general public (defined in terms of the nation and the labour market). Advanced learning across multiple disciplines Universities support a wide diversity of teaching and research at an advanced level (Education Act, 1989). Generation of knowledge and delivery of instruction that benefit the national economy The TES explicitly mentions that TEOs should align qualifications to the needs of learners and employers. Mention is also made of the need for TEOs to pursue sources of additional revenue. Contributions to the efficient use of national resources and sustainable economic development are noted in the Education Act, (1989). Generation of knowledge and delivery of instruction that benefit national social development. Universities have a moral dimension encapsulated in the Education Act (1989) as providing equity of access and acting as the critic and conscience of society. Social functions also include the development of cultural and intellectual life in New Zealand.
Measures of success in relation to the higher education system	Research is the basis for recognition and reward of individual academic staff. It also contributes positively to the reputation of a university and is often used to determine the allocation of resources and funding. The TES prioritises the research functions of the universities with emphasis on postgraduate education and research that adds to knowledge. The economic benefits of higher education The TES seeks to maximise the return on public investment in tertiary education for economic growth and transformation requiring TEOs to manage costs and reduce reliance on government income. Measures of success in relation to teaching are associated with the completion of degrees because of a positive correlation with higher graduate incomes and the nation's Gross Domestic Product.

Boundary Categories and Definitions Forming the Basis of Power in Higher Education

Boundary Categories	**Boundary definitions identified in Chapter 4**
Decision-takers in higher education: those with the power to change the measures of	*Government* The government establishes policies, funding models and regulatory frameworks which foster the achievement of national goals in relation to higher education. Funding models incentivise conformance to policy goals and directions, and regulatory frameworks constrain operations considered to be of lesser value. In New Zealand the Minister for Education has overall responsibility

improvement	for the Government's administrative and policy functions. Steering of the system is achieved through the TES and STEP. *Disciplines* The power to validate knowledge creation rests within the networks of peers that comprise the disciplines. *Universities* Universities have the power to establish an institutional identity which can constrain or enable the engagement of academic staff with teaching and research. In New Zealand the Council of the TEO establishes measures of performance and the Vice-Chancellor / Chief Executive Officer is responsible for the management of administrative and academic affairs. Senior managers perceived themselves as responsible for the management of a complex and interconnected entity that is the University, within the constraints imposed externally in the national environment. *Academic Units* Collective identities can place some constraints on academic staff and the extent to which they can engage in wider disciplinary networks. However, as the academic unit operates at the interface of institutional and disciplinary concerns it has very little power to change measures of improvement within the system. Middle managers reported their role as enablers and facilitators of financial and human resource management within the constraints imposed by the University.
Means of control at the disposal of the decision-takers	*Government* Control is exerted through the establishment of policy directions and corresponding procedures, funding and regulatory systems. In many cases substantial funding for higher education is provided by government so the level of control that can be applied is significant. The TEC is responsible for the planning, funding and monitoring systems applied to TEOs in New Zealand. In addition, the Commission can influence the activities of universities through their involvement in the design, development and negotiation of Investment Plans. *Universities* The university distributes resources to support the teaching and research work of individuals and disciplines. Control is exerted through the establishment of an institutional identity and corresponding policies, procedures, funding and regulatory systems. *Academic Units* Academic units have some freedom to establish a collective identity and implement corresponding policies and procedures. There may also be some discretion applied to the distribution of funding and the employment of academic staff. However, these functions are constrained to a greater

	or lesser extent by the institutional identity and the control exerted by government through funding and regulatory processes. *Disciplines* Professional and ethical standards for research and teaching are determined primarily within disciplines.
Means of control that are not at the disposal of the decision-takers	*Intellectual authority & collegial decision-making* Intellectual authority is distributed across universities and often within academic units where the knowledge resources reside (e.g., staff research, delivery of academic programmes and assessment of student learning). The distribution of intellectual authority is strongly aligned with collegial approaches to decision-making which provide the means for diverse groups to deliberate on matters related to teaching, learning and research. *Ethical and academic standards in relation to teaching and research* Standards, broadly defined as the codes of conduct required for engagement in teaching and research, are preserved and developed by academic staff as part of their indoctrination and participation in disciplinary networks. *Institutional Autonomy* Universities strive to protect their institutional autonomy with respect to internal organisation and governance, distribution of resources, recruitment of staff, establishment of conditions for study, and ability to generate income. The importance of institutional autonomy was recognised by representatives of government agencies. *Academic Freedom* Academic staff have a great deal of freedom to self-manage their priorities in relation to teaching and research. This includes the design of curricula and the assessment of student learning. Academics perceive the constraints on teaching and research as emanating from the collective goals of the institutional identity.

Boundary Categories and Definitions Forming the Basis of Know-how/ Knowledge in Higher Education

Boundary Categories	**Boundary definitions identified in Chapter 4**
Designers of higher education	The design of modern universities is predicated on the ideas of Humboldt and Newman developed some 200 years ago. The design is adapted and modified according to national requirements (defined largely by governments), institutional identities (defined by individual universities), and the advancement of disciplines (which can create and transmit new knowledge about the system and the processes operating within it). Middle managers recognised that decision-making within the University occurs as a result of managerial and collegial processes. In other words, both academic staff and managers share the

	responsibility for designing and developing the University.
Expertise that feeds into the system design	Potentially, there is a vast array of expertise that could feed into the design of the higher education system. Through collegial decision-making the ideas of individuals located within universities across the system—informed by their disciplinary networks—provide a rich source expertise for discussion of all matters relating to system design. In reality, the expertise that actually informs the system design is biased toward those who hold positional authority and operate at either government or university levels. Furthermore, expertise is increasingly sought from outside of the system in line with NPM and the desire to foster closer linkages between universities and the economy. The strategies and priorities for the New Zealand tertiary education system are set at government level in consultation with government agencies. TEOs are expected to conform to the overarching goals and adapt their identities and activities as necessary. Respondents in the case study often defined the University by what it was not—a business organisation built upon principles of profit and the delivery of services to customers. Academics rejected industrial or corporate models as a basis for the design and operation of universities. Middle managers observed that the relationship between academics and the University was different from that of an employee in a company in terms of the level of engagement expected in organisational decision-making. Senior managers perceived the University as an entity connected to a wide variety of local, national and international bodies and there was an expectation that sources of expertise would flow from each and all of those areas.
Guarantors of the system design defined as individuals or groups who validate the system design and judge its success.	*Government* One of the functions performed by government is assurance that higher education is of an acceptable standard and delivered efficiently and effectively. Consequently, government can be considered a guarantor of the system and this role is enacted through the establishment of measures of success and monitoring systems that evaluate their achievement. In New Zealand the MoE integrates information from other government agencies to evaluate the design and implementation of the TES and the STEP. The Ministry acts as a guarantor of the system priorities expressed in Government policy statements. The role of the TEC is more detailed. Like the MoE the Commission acts as a guarantor of policy directions signalled by the Government Minister but in addition it actively seeks to change the system design through the development and implementation of planning and funding systems that are applied to individual TEOs. The TEC also plays a significant part in the design of monitoring systems for universities. *The National Economy and the Labour Market* Measures of success are often communicated in economic terms with specific reference to productivity in the national labour market. Recent research conducted by staff in government agencies

	examined the earnings of graduates in order to calculate the income differences between those with degrees and those without (Scott, 2009). Therefore the labour market can be considered as another guarantor of university education through the premium paid for graduates. Similar can be said about the national economy in general, based upon positive correlations between the proportion of the population with university qualifications and the Gross Domestic Product per person. *Disciplines* Disciplines provide the external and international reference system for the development, evaluation, validation and communication of knowledge. The role that they play is of 'guarantor of knowledge resources' as individual academics must demonstrate that their research is of an appropriate ethical and academic standard prior to acceptance—via formal publication—of that knowledge within the disciplinary community. Senior managers noted that individual academics were connected to national and international communities through their disciplines. *Universities* In accordance with the requirements of institutional autonomy, a university performs a function of guarantor in regular demonstrations of ethical and academic standards to communities at regional, national and international levels. In New Zealand the role of guarantor is explicitly delegated to a university's council as the representative of communities served by the university and 'assurer' of the maintenance of academic standards (Education Act, 1989). An explicit requirement also exists in relation to the Investment Plan process whereby universities are required to consult with communities and industry during the development of their Investment Plans.

Appendix 3: Data Tables Forming the Basis of the Boundary Critique for the Nature and Purposes of Quality Assurance

Key: information from the expanded dataset is in green text; information related to the New Zealand context is in orange text; and information drawn from the case study findings is in blue text.

Boundary Categories and Definitions Forming the Value Basis for Higher Education

Boundary Categories	**Boundary definitions identified in Chapter 5**
Beneficiaries of quality assurance	'*Stakeholders'* served when they have assurances that universities meet minimum standards of operation, and when information regarding the efficiency and effectiveness of programmes of study is provided. TEOs should disclose evidence of strengths, weaknesses and improved performance in relation to research, programmes of study, teaching and learning and value for money. This information should be made available to students, the Government and the general public. *The 'university'* can benefit from quality assurance where it is used as a mechanism for ensuring alignment of functions with institutional goals and directions. *Audit and accreditation agencies* that provide independent assessments of programmes and universities on behalf of governing bodies. In New Zealand, government approved QABs benefit from the requirement to perform regular reviews of TEOs. Professional bodies (e.g., New Zealand Institute of Chartered Accountants, New Zealand Teachers Council and the Institution of Professional Engineers New Zealand) also benefit from the performance of accreditation processes. *Government agencies* use information generated for quality assurance purposes to inform the allocation of funds (e.g. PBRF), publish comparisons of the performance of different TEOs and provide data to inform tertiary sector policy and strategy.

The purposes of quality assurance pursued to meet the needs of beneficiaries	Provision of frameworks and performance indicators that can be applied consistently and reliably to diverse institutions by individuals and groups outside those institutions. These reporting mechanisms can then be used for multiple purposes: *Funding allocation and redistribution* *Public assurance of efficiency and effectiveness in relation to government spending on support for teaching, learning and research* Quality assurance provides for detailed reporting of performance measures for accountability purposes. Accountability is advanced through the establishment and expansion of bureaucracies that measure and report in a format that fosters uniform assessment and removes the need for value judgements and contextual interpretation. *Replacing existing (and complex) forms of evaluation with auditable and verifiable procedures* Creation of new agencies with authority to enter and review universities to assess compliance with national regulatory frameworks. Quality Assurance Bodies in New Zealand are the only agents able to recognise TEOs and assure their qualifications prior to entry on national registers. The purpose of quality assurance is to conduct audits, establish documented procedures and check compliance. To propagate systems and procedures that can be applied perpetually, and adjusted intermittently to facilitate 'steering'. Internal quality assurance enables a systematic approach to the planning and coordination of activities.

Measures of success in relation to quality assurance	Availability of information about the higher education system regarding research and its impact on the economy, programmes of study and their impact on individuals and the economy, higher education spending and 'value for money', and qualifications and the national frameworks that underpin their approval, delivery and review. In New Zealand, this includes the National Qualifications Framework, the New Zealand Register of Quality Assured Qualifications, programme accreditation and approval processes, audit and accreditation structures and implementation of the planning, funding and monitoring systems by the TEC. Availability of information about individual universities and their programmes of study, outcomes for graduates, 'value for money' and contributions to research. PBRF looks at research degree completions, external research income and peer esteem at individual, subject and university levels. Successful quality assurance is demonstrated through improved performance of TEOs in relation to the indicators measured. Accreditations received or revoked. Compliance with auditable frameworks and measures applied within and across universities. At university level this would include documented plans, policies and procedures. Compliance with procedures for planning, implementation, monitoring and review including indicators of performance. Compliance with established procedures and alignment of individual and academic unit work with university directions. Plans and formal processes implemented from the top down. Optimisation of the bureaucracy.

Boundary Categories and Definitions Forming the Basis of Power in Quality Assurance

Boundary Categories	**Boundary definitions identified in Chapter 5**
Decision-takers in quality assurance: those with the power to change the measures of improvement	*Government* Government develops the overarching quality assurance framework including requirements for higher education recognition, monitoring and reporting. In New Zealand the quality assurance system consists of data provision regarding TEO performance, recognition of TEOs on national registers, and engagement with regular reviews conducted by a government approved QAB. The TEC develops the generic frameworks and measures for performance and this includes the performance measures for research (PBRF). Representatives of the central authority discussed changes to the existing performance measures as a source of "richer material" for

assessment of sector performance.

Universities

Universities can determine their own measures of improvement but they must comply with external regulatory and performance requirements. Measures of improvement normally involve student feedback systems, research income and research outputs.

Universities devise internal planning, funding and monitoring systems modelled for compliance with external requirements.

Focus is primarily on the evaluation and improvement of teaching and learning and there is scope to change measures of improvement in relation to the planning, review and monitoring systems for programmes of study and the services that support them.

Academic Units

Academic units can determine their own measures of improvement but they must comply with the policy, regulatory and performance requirements set by the relevant university.

Academic units devise planning, funding and monitoring systems within the policy and regulatory frameworks of a university, and any specific requirements of the disciplines (e.g., professional accreditation).

Academic units supplement the measures of improvement decided at other levels of the system with their own review mechanisms including, for example, external examination processes, disciplinary reviews, and information received from "those with whom we share academic interests" (M5, p. 145).

Academic units also have significant influence on the teaching and learning process and there is some scope to change measures of improvement in relation to academic staff and programmes of study.

Academic Staff

Academic staff can determine their own measures of improvement within the limitations of broader policy, regulatory and performance requirements set by a university, an academic unit and the relevant disciplines.

Individuals select their own methods and measures for the continuous improvement of teaching, learning and research with reference to peers in their academic unit, disciplinary standards, and within the policy, procedural and resources available to their unit and university.

Accreditation Agencies (Programme Level)

Accreditation agencies that assure programmes can make changes to the criteria and standards against which the programmes are compared.

Audit and Accreditation Agencies (National Level)

Audit and accreditation agencies that operate at a national level are normally empowered by the government. Although the agencies have a limited ability to change the 'measures' of improvement, they can make

	alterations to the broad criteria and frameworks within which improvement should be demonstrated. In New Zealand, CUAP sets the broad criteria for approval and review of programmes of study and the NZUAAU fulfils the university-level auditing function which is conducted on a regular cycle.
Means of control at the disposal of the decision-takers	*Government:* funding for teaching, learning and research; legitimacy in terms of approval to operate as a university; and control over institutional reputation through selection of methods and measures to be applied and publicly reported. The latter means of control can influence the prioritisation of particular activities within a university. In New Zealand these functions are discharged through the TEC who disseminate funding, and Government sanctioned QABs (NZVCC and NZQA) that administer criteria and standards for the approval and review of TEOs and programmes of study. *Universities:* distribution of funding for teaching, learning and research within the university; and use of policy and regulatory levers to 'steer' internal operations. The latter means of control can influence the prioritisation of particular activities within academic units and disciplines. Universities also maintain control over programmes of study. New Zealand universities control their internal quality assurance, planning, funding and monitoring systems within the limits of external requirements. At a collective level, they also control approval and audit functions administered by CUAP and the NZUAAU. Case study findings noted the importance of reward systems in universities and suggested that greater emphasis should be given to those that reinforced teaching and learning. University control over programmes of study was also observed. *Academic Units:* The means of control at academic unit level are similar to those for a university except that there is a greater ability to influence the selection and management of human resources including those that contribute to course design, student achievement and programme review. Case study respondents reported positive views of quality assurance processes that were within their control at this level (e.g., external examining, programme reviews, internal planning). *Academic Staff:* engagement with, and improvement of teaching, learning and research using various evaluation methods such as student evaluation of teaching and peer review of research. The level of interaction and engagement with students was seen as something determined by academic staff. *Accreditation Agencies (Programme Level):* university reputation in terms of accreditations lost or gained, and control of the curriculum in terms of what is taught and assessed. In New Zealand, teaching, accountancy and engineering were observed as examples where professional bodies could set standards and influence the curriculum delivered within a university.

	Accreditation Agencies (National Level): reputational impact via approval (or withdrawal of approval) to operate as a university. *Audit Agencies (National Level):* potential for reputational impact through the provision of public reports on university-level operations.
Means of control that are not at the disposal of the decision-takers	*Disciplines:* defined in terms of the frameworks, networks and procedures that govern the development, evaluation and communication of knowledge. *Learning:* only decision-takers within a university can support and encourage student (and staff) learning— and these decision-takers are mainly at individual and academic unit levels. Only teaching staff can assess the quality of student work and provide feedback that can support student learning. *Critical review of teaching or research 'quality':* following from the statements regarding disciplines and learning, critical review of 'teaching' or 'research' is beyond the control of quality assurance decision-takers. Critical review of teaching and research is conducted within the academic unit based on contributions from the broader academic, professional and disciplinary networks. *Motivation to excel*: case study respondents discussed the drive to create, innovate, and excel as an inherent feature of the University that existed because staff were highly motivated and committed individuals.

BOUNDARY CATEGORIES AND DEFINITIONS FORMING THE BASIS OF KNOW-HOW/ KNOWLEDGE FOR QUALITY ASSURANCE IN HIGHER EDUCATION

Boundary Categories	**Boundary definitions identified Chapter 5**
Designers of quality assurance	Government agencies design the national accreditation and reporting requirements including agencies for the administration of quality assurance. In New Zealand, design and implementation of the quality assurance system is shared between the government and the universities. Design of the Quality Assurance and Monitoring System was articulated by the Office for the Minister of Tertiary Education (2006) and included planning, funding and monitoring systems that supported objective assessment of TEOs by the TEC. However, authority for the quality assurance of universities and programmes of study is delegated to the NZVCC via the Education Act (1989). Quality assurance agencies (accreditation and audit) develop the criteria and standards for the assessment of universities and selected programmes. Quality assurance agencies define the form, function and documented outputs of quality assurance. The approved QAB for New Zealand universities is the NZVCC which has delegated authority for the approval of programmes of study to CUAP and the quality audit of universities to the NZUAAU. Other agencies including the New Zealand Teachers Council and Institute of Professional Engineers New Zealand also have a role to play in the

	design of quality assurance systems for particular programmes of study. Within universities, staff develop broad plans, policies and reporting requirements as part of internal quality assurance frameworks. These frameworks include systems for the development and approval of programmes of study and the measurement and reward of research, teaching and learning. At academic unit level quality assurance design is most associated with human resource management and localised reviews of teaching, learning and research. Within universities positive images were presented of quality assurance as it pertained to internal processes for planning and programme review. International networks of academic staff—clustered broadly within disciplines—play an important role in the design of mechanisms for self-reflection and peer-review which form the basis for quality assurance of teaching and research.
Expertise that feeds into the system design	There are two main sources of expertise that feed into the design of the quality assurance system for universities. Government, audit and accreditation agencies appear to place greatest importance on knowledge and expertise from outside a university including from professional bodies, quality management models imported from business organisations and quality assurance agencies. Conversely, universities prioritise expertise that comes from within them. This includes the experiences of staff and students, informed by disciplines, and inter-university networks. The requirements of quality assurance agencies also provide a source of expertise, but this is perceived as peripheral to that located within universities. In regard to evaluation of research, teaching and learning, case study respondents emphasised the need for the application of independent expertise from similar contexts (academic units, disciplines).
Guarantors of the system design defined as individuals or groups who validate the system design and judge its success.	There is an element of self-referencing in relation to the design of quality assurance and the expertise that feeds into the system design. Government and associated agencies design the quality assurance system around the public availability of information about programmes of study, graduate outcomes and quantifiable measures of success. Government and associated agencies are also guarantors of the system who validate the design based upon the information yielded by the quality assurance system. The TEC develops the framework for the 'investment plans' of TEOs, sets the performance indicators against which all TEOs are assessed, and uses this information for funding purposes. In New Zealand the TEC has a role of system designer, implementer and guarantor. Representatives from the central authority in the case study identified government as a guarantor of the quality assurance system in terms of its relationship to government policies and strategies, and the economic outcomes for individuals and the

	nation. Universities play a dual role as guarantors of the internal and external methods and measures for quality assurance. Case study respondents commented on the perceived deficiencies of external quality assurance requirements and the difficulties associated with implementing an effective internal quality assurance system. Their comments suggested that there was no specific 'guarantor' of the quality assurance system – the responsibility was shared and distributed amongst university stakeholders such as academic staff, academic units, students, employers and graduates. Academic staff and disciplinary networks are the guarantors for teaching, learning and research.