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Evaluation criteria for selected administrative and support systems in South African Higher Education institutions

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**Evaluation criteria for selected administrative and support
systems in South African Higher Education Institutions**

**Dissertation prepared in fulfilment of the requirements for the degree of
Magister Technologiae (Quality)**

BY

RENEE WEIDEMAN

**INSTITUTION: CAPE PENINSULA UNIVERSITY OF
TECHNOLOGY**

Supervisor: Dr Dan Coetzee

2008-03-04

DECLARATION

I, Renee Weideman, hereby declare that the content of this thesis is my own original work, and that the thesis has not previously been submitted for academic examination towards a qualification.

Signature:

Date:

ACKNOWLEDGEMENTS

I *firstly* want to thank my Lord and Saviour Jesus Christ, who gave me the physical, mental and emotional capacity to do this work.

Secondly, I also would like to express my sincere gratitude to a number of people who have made it possible for me to complete this thesis:

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ABSTRACT

The aim of this research is to identify criteria for the evaluation of support systems applicable to public higher education institutions from a limited international and national perspective. The objectives of the research are to identify the criteria available from existing and related fields through a literature review and to validate the evaluation criteria using an empirical study.

The existing literature describes the relevant academic processes, but very little has been written on criteria for evaluating support systems. The research for this study attempts to address this deficiency. The criteria from the Coetzee Model were used as a basis for this research and other models in the existing literature were also referred to, including the Baldrige National Quality Program for Education Criteria, ISO 9001:2000, European Foundation Quality Model and the South African Excellence Model. This research also draws on information deemed important by the Higher Education Quality Committee and the South African Qualifications Authority.

Both qualitative and quantitative data collection methods were used in the investigation. The research instruments used included questionnaires and interviews. Questionnaires were distributed to all public universities, universities of technology, and one technikon in South Africa. The results of the study revealed that most respondents agreed with the generic criteria against which units should be evaluated; namely “leadership”, “strategic goals and performance indicators”, “resourcing and funding”, “policies and procedures” and “self-evaluation guidelines”. Statistical analysis was done on the criteria.

The two main findings of the research showed that the first five generic criteria were valid and reliable and that there was good internal consistency among the items in each of these criteria, which confirms that the results were valid.

It is recommended that for future research, the study should be expanded to support units in higher education not included in this study. The suitability of generic criteria and the development of further specific criteria should be determined. Quality-related arrangements for community engagement, where appropriate, should be adequately resourced and monitored for each unit.

Once evaluations and surveys have been conducted on support units using the criteria, the process of benchmarking should be used for preventing potential problems and improving results.

KEYWORDS

Administration, audit, core processes, criteria, customer, evaluation, higher education, key performance indicators, principles, quality, support processes, systems

GLOSSARY

Audit

A systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled (ISO, 2000b).

Audit criteria

Audit criteria indicate the requirements for institutional policies, systems, strategies and resources for assuring, developing and monitoring the quality of teaching and learning, research and community engagement (CHE, 2004b).

Effectiveness

The extent to which planned activities are realised and planned results achieved (ISO, 2000b).

Efficiency

The relationship between the results achieved and the resources used (ISO, 2000b).

Policy

A policy is a guide to thinking, action and decision. A policy can, therefore, be anything that constrains actions and decisions. Policies are essential for ensuring the effective planning of processes because they lay down the rules to be followed to ensure that actions and decisions taken in design and operation of processes serve the business objectives (Hoyle, 2003).

Procedure

A specified way of carrying out an activity or a process (ISO, 2000b).

Process

A process is defined as a series of actions or steps for achieving a particular end and performing a series of operations to change (Oxford English Dictionary, 2007).

Programme

A programme is a purposeful and structured set of learning experiences that leads to one or more qualifications and that will enable learners to achieve pre-specified exit-level outcomes (RSA, 1996).

Quality

| Definition | Description |
|---------------------|---|
| Fitness for purpose | Judges quality in the context of mission differentiation of institutions within the national framework. |
| Fitness of purpose | Evaluates quality in terms of its national goals, priorities and targets. |
| Value for money | Judges quality in relation to the full range of higher education purposes as set out in the White Paper. Judgements about effectiveness and efficiency of provision will include but not be confined to labour market responsiveness and cost recovery. |
| Transformation | Sees quality in the sense of developing capabilities of learners for personal enrichment, as well as the requirements for social development and economic and employment growth. |

Source: CHE, 2001

Quality evaluation

Quality evaluation in education is defined as every structured activity that leads to a judgement of the quality of the teaching/learning process and/or research, whether it is in the form of self-evaluation or evaluation by external experts (Vroeijenstijn, 1995).

Quality management principle

A quality management principle is a comprehensive and fundamental rule or belief for teaching and operating an organisation aimed at continually improving performance over the long term by focusing on customers while addressing the needs of all other stakeholders (ISO, 2000b).

Quality management system

Implementing a quality management system involves directing and controlling an organisation with regard to quality (Hoyle, 2003).

Student development

Student development refers to those extracurricular campus activities designed for quality of life and personal and social development, such as leadership development, sport, gender support groups, and student political, cultural, religious and social societies, as well as appropriate forms of communication and support for off-campus students (CHE, 2005).

Student support

Student support refers to those services that support students in their day-to-day lives on campus, as well as those services that support them in their academic work. This includes, among other things, services in financial aid, bursary and loan schemes, residences, student counselling, library services and resources, Information and Communication Technology (ICT) provision, health services and support for students with HIV/AIDS (CHE, 2005).

System

A system may be seen as a chain of interconnected components or processes that produce strategic results. Each component or process has a unique purpose within the system without which the system cannot function (Hoyle, 2003).

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ACRYNOMS

| | |
|-----------------|--|
| EFQM | European Foundation for Quality Management |
| ID | Identification number |
| ICT | Information and Communication Technology |
| HE | Higher Education |
| HEQC | Higher Education Quality Committee |
| ISO | International Organization for Standardisation |
| NCHE | National Commission on Higher Education |
| NSFAS | National Students Financial Aid Systems |
| RSA | Republic of South Africa |
| SAEF | South African Excellence Foundation |
| SAEM | South African Excellence Model |
| SAQA | South African Qualifications Authority |
| SERVQUAL | Service Quality Measuring Index |
| SETA | Sector Education and Training Authority |
| SSCDS | Society for Student Counselling and Development Services |
| TQM | Total Quality Management |

CHAPTER 1: INTRODUCTION

This chapter will highlight the background to the study, the legislative framework and the problem statement, as well as the aims and objectives of the study. The delimitations, research methodology and structure of the thesis will also be introduced.

1.1 BACKGROUND TO THE STUDY

The focus on quality and the role of quality assurance in a transformed higher education system are prominently flagged in the recommendations of the National Commission on Higher Education (NCHE) contained in a report produced in 1997, entitled “A Programme for Transformation in Higher Education”.

The NCHE made it clear that a comprehensive, development-orientated quality assurance system is central to the creation of a single coordinated higher education system. The NCHE argues that quality assurance mechanisms are essential for addressing differences in quality across institutional academic programmes. It also sees quality assurance as an important element of the new form of governance proposed for higher education, as well as one of the ways of drawing private higher education into the new system (NCHE, 1997).

Subsequently, the Education White Paper 3 of 1997 also reinforced quality as a critical discipline for restructuring higher education (DOE, 1997). However, the paper did not indicate how this should be achieved. In addition it focused mainly on academic programmes and neglected to concentrate on administrative and support services such as libraries and information and communication technology (ICT). Administrative support services play a pivotal role in supplementing the academic development of the student. The lack of criteria for these services poses a problem because these units do not know how to perform their daily activities efficiently. In addition, academics fail to see the importance of the administrative services in the development of the student.

1.2 THE LEGISLATIVE FRAMEWORK

In order for an academic institution to operate, it needs to conform to legislative requirements, such as the South African Qualifications Authority (SAQA) Act of 1995 and the Higher Education Act of 1997 (CHE, 2002).

Academic programmes in higher education institutions use the criteria in the programme accreditation criteria document to evaluate the quality of their programmes; however, the document

does not include formalised criteria for administrative and support services, although the Higher Education Quality Committee (HEQC) specifies that these should be audited. The HEQC institutional audit criteria document specifies that the core processes of higher education institutions should include teaching and learning, research and community service. For teaching and learning to take place effectively, there is a need for support services criteria to be used during evaluations.

1.3 PROBLEM STATEMENT

The Council on Higher Education (CHE) recommends that there should be regular evaluations of the support services that supplement the core processes of the institution. It is for this reason that we need to develop criteria against which to evaluate these support services.

Suitable evaluation criteria have not been formalised for administration and support services in South African higher education institutions, nor does the CHE have in-depth criteria for such services.

1.4 THE AIM OF THE STUDY

The aim of this research will be to investigate criteria for evaluating administration and support systems from an international and national perspective, and to formalise a set of criteria from those investigated to facilitate the evaluation of support services in higher education institutions.

International and national models will be investigated and a review of related literature, as well as questionnaires and interviews, will be used to analyse the models.

1.5 OBJECTIVES

This research is intended to provide a better understanding of quality management for administration and support systems in higher education institutions.

Hence, the following objectives are designed to:

- investigate criteria available in existing related models and the literature
- design a model
- develop a final list of generic and specific criteria for various administrative support services.

The output from the research will enable higher education institutions to use the criteria and the model during their self-evaluation processes.

1.6 DELIMITATIONS

The study will be limited to all public universities and universities of technology, as well as one technikon in South Africa, that have the following support units: Counselling and Health, Health and Safety, Student Housing, Financial Aid, Student Development, Human Resources, Finance, Information Communication Technology, Marketing, Protection Services, Technical Support, Library, Examinations Administration as well as Admission and Registration of Students. All other support units are excluded from this study.

1.7 STRUCTURE OF THE THESIS

Chapter 2 contains a review of the literature on the various international and national models. The models reviewed include the Baldrige National Quality Programme for Education, ISO 9001:2000, the Gap Model, and the South African Excellence Model, as well as those of the Higher Education Quality Committee and the South African Qualifications Authority.

Chapter 3 outlines the research design and methodology used in this study, and the research instruments used are discussed in detail. Preliminary work is outlined and a model developed. The research methodology will take both a qualitative and a quantitative approach during the study. The methodology will entail the following:

- A list of criteria in the form of questionnaires will be sent to selected Heads of Departments of public higher education institutions for comment and discussion. The data will be collected from questionnaires and interviews.
- The information gathered from the above will be used to determine the appropriateness of the draft administrative and support criteria using a statistical package.
- Interviews will be arranged with selected institutional managers to create an awareness of the evaluative criteria for administration and support and also to add to the key process of the support units.

The preliminary data collected will be analysed and, from this analysis, conclusions will be drawn. Recommendations will be made that, it is hoped, will enhance the effectiveness of support and administrative quality evaluations.

Chapter 4 includes the data analysis of the main study. The Statistical Package for Social Sciences (SPSS) package is used to analyse the results.

Chapter 5 concludes this research and presents recommendations for a future study.

CHAPTER 2: LITERATURE REVIEW

Key terms such as “evaluation”, “criteria”, “key performance indicators”, “processes”, “administration” and “higher education activities” will be discussed in this chapter. The intention of the literature review was to source criteria from internationally and nationally accepted models and frameworks. These models are listed as follows:

International models:

- Baldrige National Quality Programme for Education Criteria (BNQP)
- International Organisation for Standardization 9001:2000 (ISO 9001:2000)
- European Foundation Quality Model (EFQM)
- Gap Model

National models:

- South African Excellence Model (SAEM)
- South African Qualifications Authority (SAQA)
- Higher Education Quality Committee (HEQC)
- Coetzee Model

The structure of chapter 2 is illustrated in figure 2.1 and shows the relationship between the various models used in the literature review.

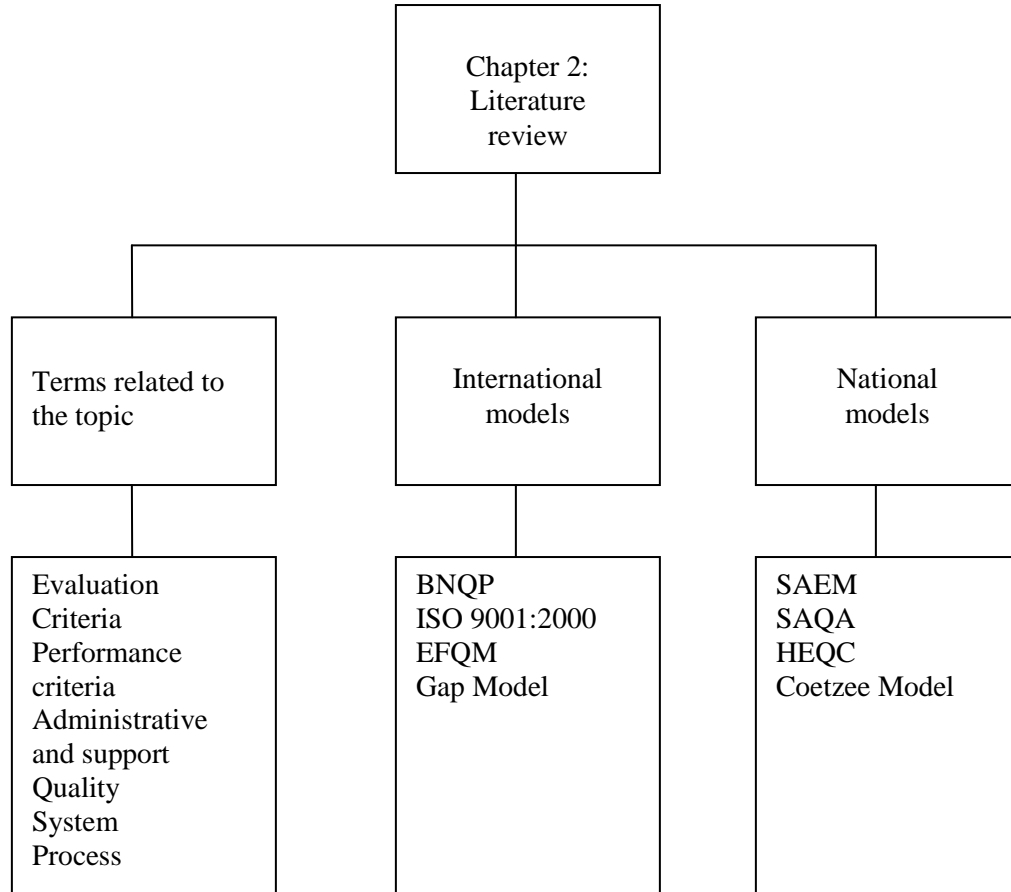


Figure 2.1: Structure of chapter 2: Literature Review

2.1 EVALUATION

The use of the term “evaluation” in higher education means to discover by investigation how well units are functioning. Self-evaluation is about whether educational objectives are being achieved and whether current practice can be improved upon (Brenner, Frazer and Williams, 1995). In higher education the term “self-evaluation” is commonly used and is used interchangeably with “self-assessment”.

Accountability involves rendering some form of account that an activity can be carried out effectively and efficiently (Loder, 1990). The extent to which accountability exists within an institution is determined by the organisational structure, its policies and culture, and the person who makes the decisions.

2.2 CRITERIA

A criterion is an established rule for testing the quality of performance; a principle or standard by which something may be judged or decided (Oxford English Dictionary, 2007). It should be noted that this explanation refers to principles; hence principles are similar to criteria. The words “principle”, “standard” and “criteria” are used interchangeably in this study. One of the key objectives of the research is to gather data about criteria. A criterion is assumed to include a valid focus, a standard and indications of the types of evidence against which to test that standard (CHE, 2004b).

2.3 PERFORMANCE CRITERIA AND KEY PERFORMANCE INDICATORS

In this study, performance indicators and goals are also referred to as criteria; criteria can include measurements such as objectives and weightings. The meaning of criteria in this study is used in its narrow sense to specify what will be measured as opposed to how it will be measured.

Key performance indicators (KPIs) are frequently used to measure certain activities, such as the benefits of leadership development, engagement, service and satisfaction. KPIs are typically tied to an institution’s strategy. Maurer, Kirwin and Ambrose (2004) state that when identifying KPIs, the SMART method should be applied, that is, one should ask the following questions: Are they **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**imely (SMART)?

Ashworth and Harvey (1994) state that the main features of performance indicators in supporting the management process are to:

- provide relevance in terms of the mission statement of the institution
- assist in the monitoring and evaluation of the institution’s activities
- provide data on which to make judgments on resource allocations
- assist in forward planning and decision making
- ensure the acceptance and motivation of all staff.

The performance indicators, as part of the quality management system in the support units referred to in the delimitations in chapter 1, still have to be developed.

2.4 PROCESSES

ISO 9001:2000 highlights the importance of processes in a quality management system (ISO, 2000a). The general requirements of ISO 9001:2000 are stated below and the emphasis on processes are clearly stated in the standard.

“General Requirements:

The organization shall establish, document, implement and maintain a quality management system and continually improve its effectiveness in accordance with the requirements of this International Standard.

The organization shall:

- identify the processes needed for the quality management system and their application throughout the organization
- determine the sequence and interaction of these processes
- determine criteria and methods needed to ensure that both the operation and control of these processes are effective
- ensure the availability of resources and information necessary to support the operation and monitoring of these processes
- monitor, measure and analyse these processes and
- implement actions necessary to achieve planned results and continual improvement of these processes”.

The support unit processes are very relevant to this study in that when evaluations are conducted it is important that the requirements of the processes are understood.

Hoyle (1998) maintains that “all work is a process” and this should be a fundamental principle in business. A process is a set of interrelated or interacting activities that transforms inputs into outputs (ISO, 2000a).

2.5 THE LINK BETWEEN SUPPORT ACTIVITIES AND THE CORE FUNCTION OF AN ACADEMIC INSTITUTION

The Porter Model (Porter, 1985) in figure 2.2 includes two types of activities: support and primary activities. In the literature, the term “activity” is used interchangeably with the term “process”; hence reference is made to core and non-core processes in Coetzee (1995).

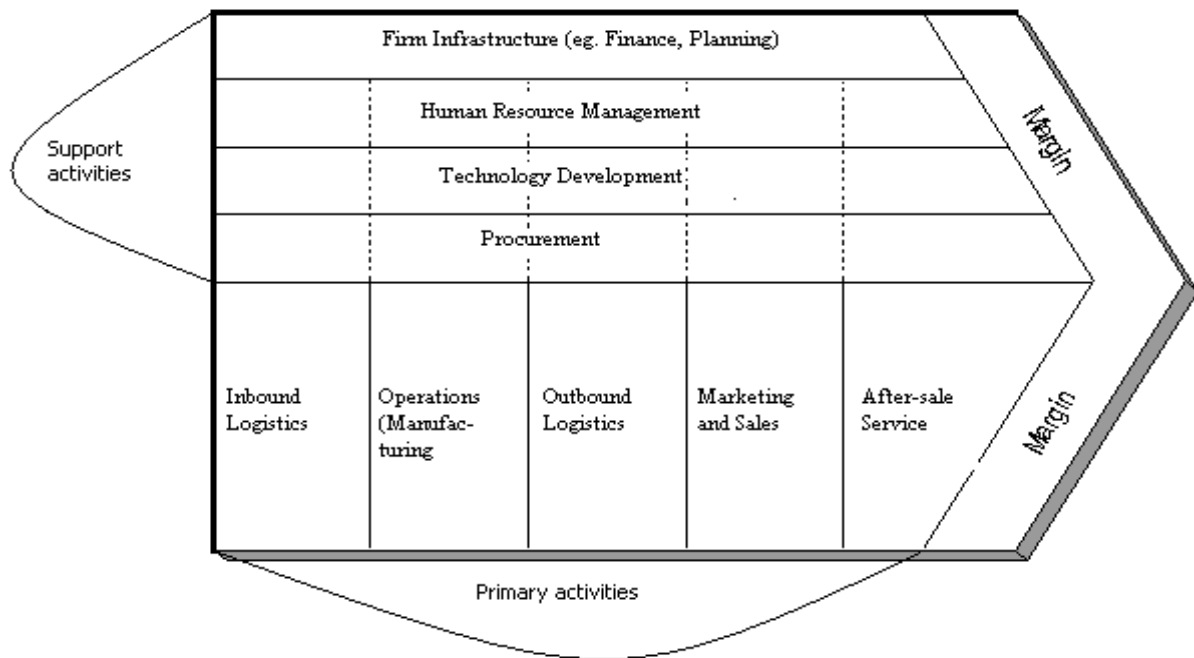


Figure 2.2: Porter Model
Source: Porter, 1985

The primary, value-adding activities referred to in the Porter Model include those involved in production, marketing and sales, and after-sales service. These processes make up what is referred to as a value chain (Porter, 1985). The equivalent of these processes in higher education is teaching and learning, community service and research (CHE, 2004b).

The support activities referred to include those activities that provide overall infrastructure, human resources, technology and procurement functions to support the primary activities. This also applies to the higher education context.

The Porter Model (Porter, 1985) can be applied in higher education, with the primary activities, ranging from inbound logistics to after-sales service, being equated to teaching and learning, research and community service. These are the core functions of such an institution. There is a clear

relationship between support activities such as Information Communication Technology, Human Resources, Finance and Infrastructure and the core activities of a higher education institution.

2.6 SYSTEMS HIERARCHY

In figure 2.3, the systems hierarchy as presented by Hoyle (1998) is of critical importance for showing the relationship between the various components of a system. The principle that is conveyed by the model is the link between the following entities: system, subsystem, process, work process, task and activity.

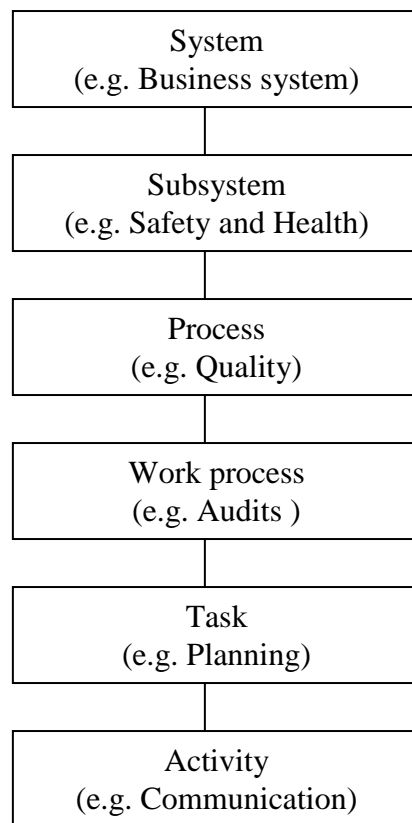


Figure 2.3: Systems hierarchy
Source: Hoyle, 1998 (adapted)

2.7 ADMINISTRATION

Those persons that contribute indirectly to the organisation's goals, whether as operators or managers, become part of the administrative component (Parkinson, 1957).

The importance of administration is highlighted by Raymond Ackerman, the CEO of Pick 'n Pay, in the Four-leg Model illustrated in figure 2.4. Administration is depicted as being one leg of the Four-leg Model, while its relationship to the other three main legs of the business model is also shown. This provides some context for the position and relevance of the administration function in an organisation. Administration as one of the four legs or domains of an organisation comprises part of Ackerman's (2005) philosophy for running a business.

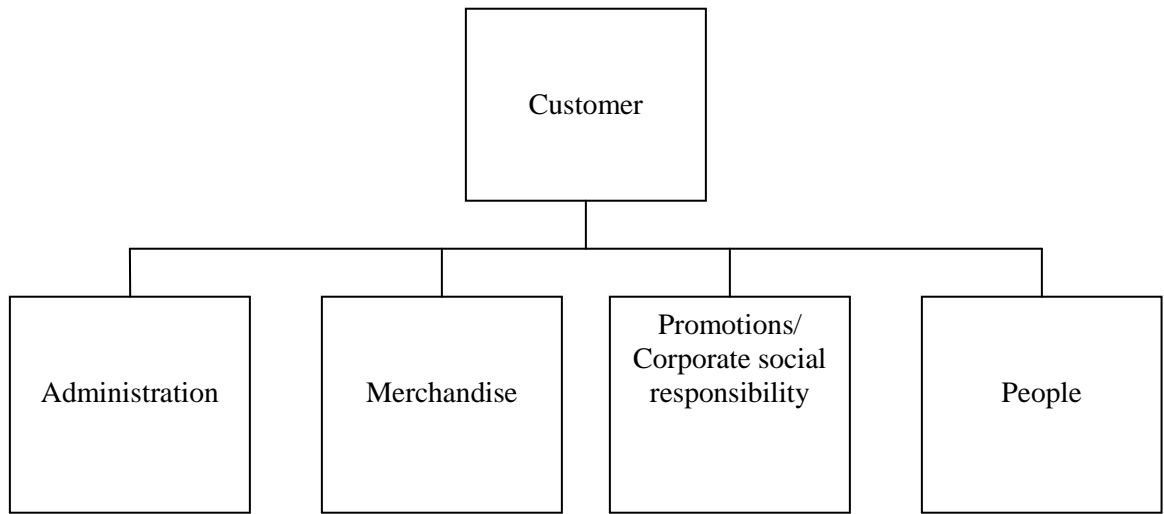


Figure 2.4: Four-leg Model

Source: Ackerman, 2005

2.8 MUTUAL REINFORCEMENT FRAMEWORK

The Mutual Reinforcement Framework in figure 2.5 shows the alignment between the major domains of a higher education system (CTP, 2004). This framework does not, however, show the detail of inputs and outputs. This framework is similar to the Porter Model (Porter, 1985) and the ISO 9001:2000 Model (ISO, 2000a), it is only the presentation that differs.

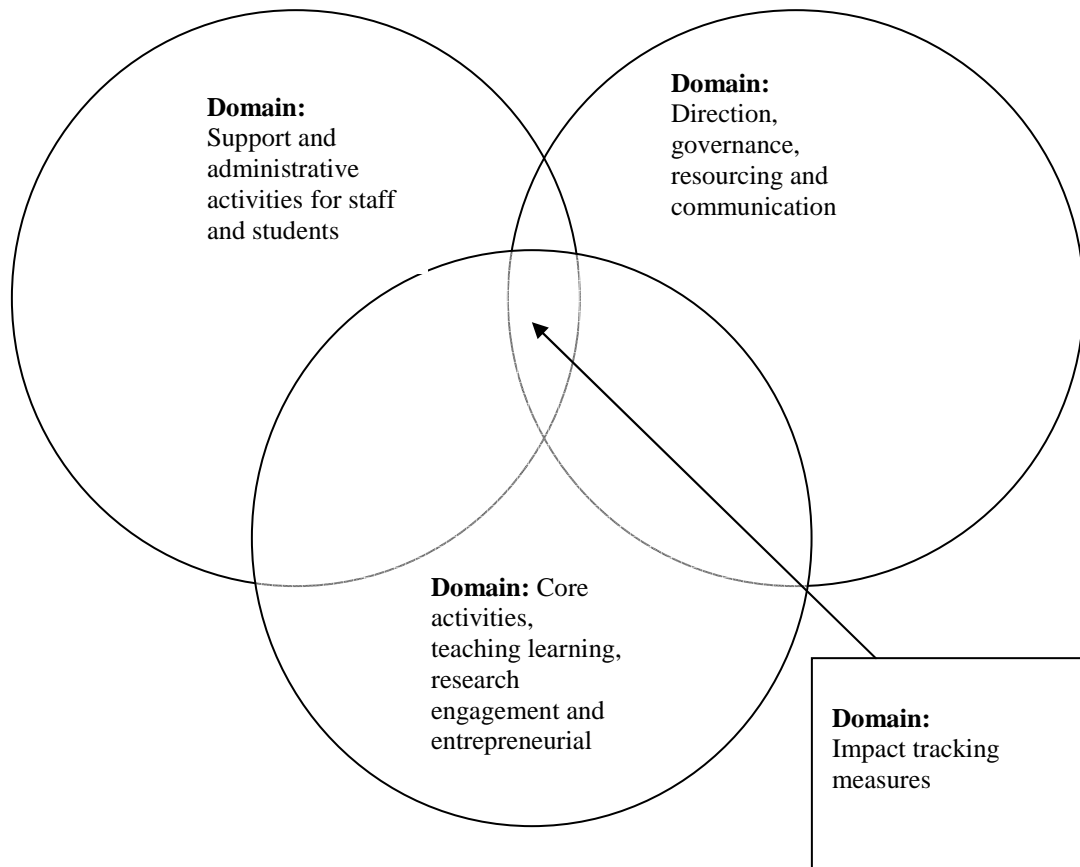


Figure 2.5: Mutual Reinforcement Framework
Source: CTP, 2004

It is worthy of note that this framework includes support and administrative activities for staff and students, which are seldom found in other frameworks. In addition it includes impact-tracking measures, which are also found in the ISO 9001:2000 Model in the clause Measurement, Analysis and Improvement (ISO, 2000a).

It is evident that the framework has a few shortcomings, such as “leadership”, “planning”, “quality management” and “resource management” criteria are not easy to identify. The Mutual Reinforcement Framework has not yet been adopted in South Africa, although it does have merit for application to higher education institutions.

2.9 QUALITY

Crosby (1979) defines “quality” as conformance to customer requirements, whereas Juran and Gryna (1980) defines quality as fitness for purpose and this is more strategic in nature in that it refers to the mission of the organisation. According to Juran and Gryna (1980), quality means fitness for use. The end user does not always know the specifications of the product or service involved and therefore judges it on its fitness for use. This is the definition that the Council on Higher Education (CHE) has adopted (CHE, 2001).

The CHE therefore defines “quality” as fitness of purpose. The fitness of purpose of the institution is articulated in the mission, goals and objectives in response to the local, national and international contexts (CHE, 2004a). For example, a learning programme or activity is of high quality if it is demonstrably relevant, desirable or feasible for those who are intended to benefit from it. Quality is about adding value to individual, local and national capability. In some cases the higher education institution can determine its own purpose, free of external requirements. In other cases there are certain non-negotiable national development requirements according to which it must determine its mission (CHE, 2004b).

2.10 BALDRIGE NATIONAL QUALITY PROGRAM EDUCATION CRITERIA (BNQP)

The Baldrige National Quality Program is used in this study because it contains criteria that may contribute to the final list of criteria for support systems in higher education. These criteria may therefore be used to improve performance during evaluations.

2.10.1 Overview of Baldrige National Quality Program Education Criteria (BNQP)

The Baldrige National Quality Program (BNQP) is the primary quality programme in the United States of America and has also been legislated in the country. It is a specific model for education and is endorsed by the United States National Institute of Standards and Technology. The criteria of the BNQP are depicted in figure 2.6. This model assists organisations to respond to current challenges, for example the need to create value for students, stakeholders and the organisation, openness and transparency in governance and ethics, and the provision of innovation that capitalises on knowledge assets. Self-assessment may be performed as an internal improvement effort. This assessment helps to identify strengths and highlights opportunities for improving processes and results (US NIST, 2004).

The criteria are designed to help organisations use an integrated approach to performance management that results in improving value for students and stakeholders, contributing to education quality, improvement of overall organisational effectiveness and capabilities and organisational and personal learning (US NIST, 2004).

The BNQP provides a systems perspective for managing an institution and its key processes to achieve overall performance. A systems perspective includes the senior leaders' focus on strategic directions with respect to the students and stakeholders. Senior leaders monitor, respond to and manage performance based on the organisational results. The Education Criteria for Performance Excellence framework is embedded in seven criteria: "leadership", "strategic planning", "student, stakeholder and market focus", "measurement, analysis, and knowledge management", "faculty and staff focus" and "process management and organisational performance results". The organisational profile provides the context for the way the institution operates and organisational performance management guides the strategic challenges, working relationships and environment (US NIST, 2004).

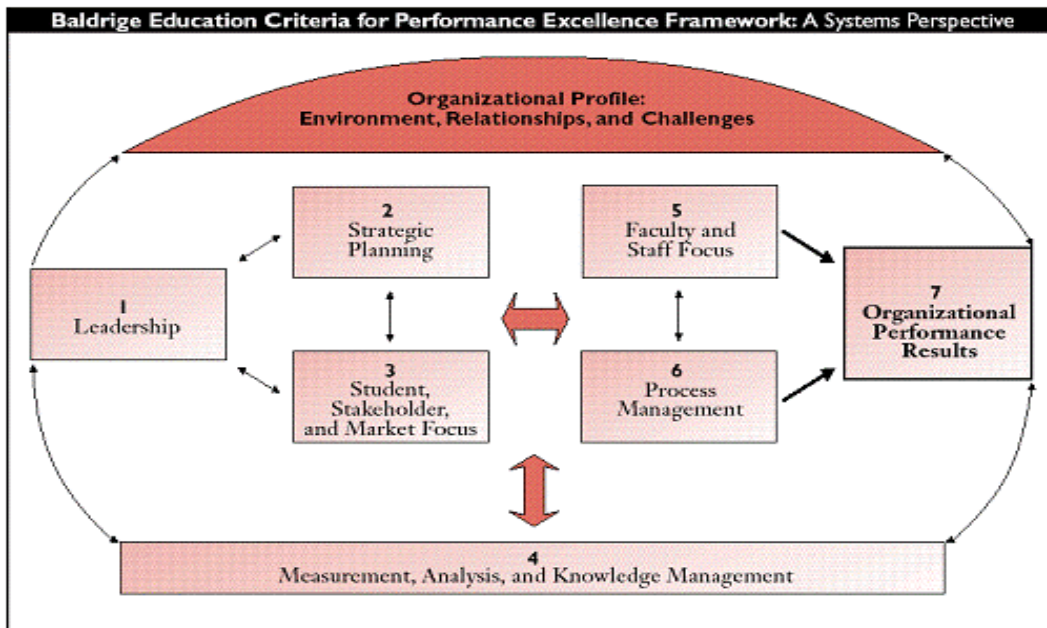


Figure 2.6: National Education Criteria for Performance Excellence Framework
Source: US NIST, 2004

2.10.2 Principles of the Baldrige National Quality Program (BNQP)

US NIST (2004) states that institutions have a set of principles and values that form the basis for integrating criteria within the BNQP. These produce organisational performance results which provide feedback for the quality management system. These principles are as follows:

- **Visionary leadership**

The organisation's senior leaders should give direction and create customer focus, and should possess clear and tangible values and high expectations. The direction, values and expectations of leadership should balance the needs of all stakeholders.

- **Customer-driven excellence**

Quality and performance are judged by an organisation's customers, therefore the organisation must take into account all the features and characteristics of their products and services and all the modes of customer access that provide value for the customer.

- **Organisational and personal learning**

Achieving the highest level of organisational performance requires a well-executed approach to organisational and personal learning. Organisational learning includes both continuous improvement and adaptation to change.

- **Valuing employers and partners**

An organisation's success depends increasingly on the knowledge, skills, creativity and motivation of its employees and partners.

- **Agility**

Success in globally competitive markets demands agility, as well as the capacity for rapid change and flexibility.

- **Focus on the future**

A focus on the future requires consideration of the short and long term factors that affect the organisation and the marketplace.

- **Managing for innovation**

Innovation means making meaningful changes to improve an organisation's products, services and processes.

- **Management by fact**

Organisations depend on the measurement and analysis of performance. Critical data and information about key processes, outputs and results should be gathered.

- **Public responsibility and citizenship**

In dealing with the public, leaders should stress responsibility and demonstrate ethical behaviour, as well as be aware of the need to practise good citizenship at all times.

- **Focus on results and creating value**

An organisation's performance measures need to focus on key results. Results should be used to create and balance value for key stakeholders, that is, customers, employees, suppliers and partners, the public and the community.

- **Systems perspective**

The criteria of the Baldrige Program provide a systems perspective for managing the organisation in such a way that performance excellence is achieved. The core values and categories form the building blocks and the integrating mechanism for the system.

2.10.3 Criteria of the Baldrige National Quality Program (BNQP)

US NIST (2004) states that the criteria of the Baldrige National Quality Program are as follows:

- **Organisational profile**

An organisational profile is a snapshot of an organisation influenced by how it operates and the key challenges it faces. Organisational environments need to know their stated purpose, vision, mission and values. Use of terms such as "purpose", "vision", "mission" and "values" varies depending on the organisation, and some organisations may not use one or more of these terms. Nevertheless, there should be a clear understanding of the essence of the unit, why it exists, and where the senior leaders want to take it in future.

- **Leadership**

Leadership examines how the institution's senior leaders address values, directions, performance and expectations. Governance and how the organisation addresses its ethical, legal and community responsibilities are also examined.

- **Strategic planning**

Strategic planning assesses how the institution develops strategic objectives and action plans and how they are deployed. The institution's progress in achieving its objective against its strategic plan is then measured.

- **Student, stakeholder and market focus**

Student, stakeholder and market focus, as a criterion, examines the methods used to obtain such focus. It determines the requirements, needs and expectations, and preferences of students, stakeholders and markets. The organisation builds relationships with students and stakeholders and this leads to student satisfaction, loyalty, student perseverance, increased educational services and programmes, and organisational sustainability.

- **Measurement, analysis and knowledge management**

Measurement, analysis and knowledge management assess the way in which the institution selects, gathers, analyses, manages and improves its data, information and knowledge assets. The institution involved also manages organisation reviews and uses these reviews to improve its performance.

- **Faculty and staff focus**

Faculty and staff focus examine the way in which the encouragement of staff learning and motivation at the institution enable employees to develop and use their full potential to the advantage of the institution's overall objectives and action plans.

- **Process management**

Process management assesses the key processes, work systems and designs. Process management manages and improves the key processes for implementing work systems to deliver student value and achieve organisational success.

- **Organisational performance results**

Organisational performance results examines the institution's performance and improvement in key result areas. They examine student outcomes such as; budgetary, financial and market; process effectiveness and leadership. Performance levels are examined relative to those of competitors and other organisations providing similar programmes and services.

2.11 ISO 9001:2000

The principles and clauses contained in the ISO 9001:2000 standard (ISO, 2000a) were used to assist in investigating the criteria and to determine whether they would be useful in designing the model.

2.11.1 Overview of ISO 9001:2000

ISO 9001:2000 has been developed by the International Organization for Standardization (ISO) and is the accepted international standard for quality (ISO, 2000a). The implementation of the ISO quality standard ISO 9001:2000 is influenced by the objectives, the services provided, the processes employed and the structure and size of the organisation. This process approach is used to enhance customer satisfaction by meeting customer requirements (ISO, 2000a). Such an approach emphasises the importance of:

- understanding and meeting requirements
- the need to consider processes in terms of added value
- obtaining results of process performance and effectiveness
- processes based on objective measurement with continual improvement.

The model in figure 2.7 shows a process-based quality management system and illustrates process linkages to all relevant activities. Interested parties, including customers and other stakeholders, play a major role in defining input requirements. Monitoring the satisfaction of interested parties requires the evaluation of information relating to the perceptions of interested parties on whether or not the organisation has met their requirements (ISO, 2000b).

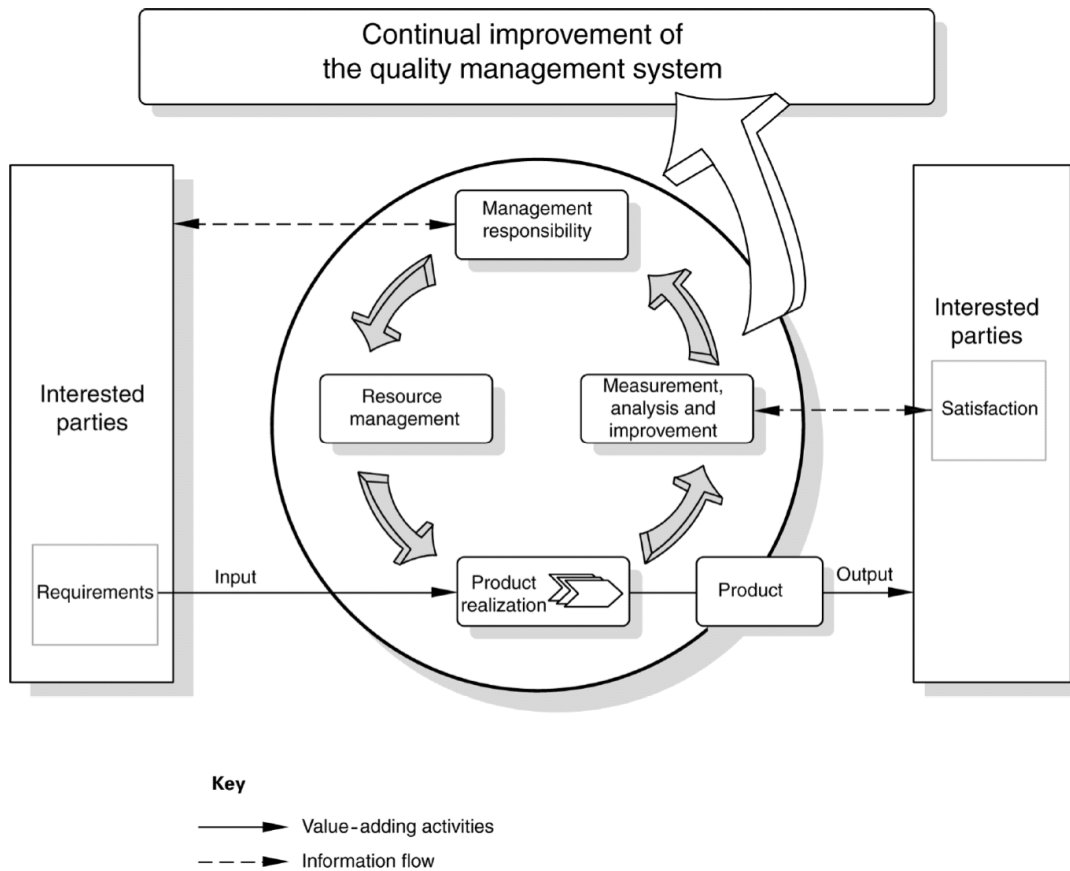


Figure 2.7: The model of a process-based Quality Management System
 Source: ISO, 2000b

2.11.2 Principles of ISO 9001:2000

The ISO (2000b) states that the ISO 9001:2000 code of practice has eight quality management principles. Each principle is elaborated below:

- **Leadership**

Establish the direction, unity of purpose and supportive work environment within an organisation. The internal environment must be maintained so that people can become fully involved in achieving the organisation's objectives.

- **Customer focus**

Organisations should understand the current and future needs and expectations of the customers and strive to exceed customer expectations.

- **Process approach**

A desired result is achieved more efficiently when activities and related resources are managed as a process.

- **Systems approach to management**

Identifying, understanding and managing interrelated processes as a system contributes to the organisation's effectiveness and efficiency in achieving its objectives.

- **Involvement of people**

Ensure that all employees at all levels are able to use their abilities fully for the institution's benefit.

- **Factual approach to decision making**

There is the acknowledgement that sound decisions should be based on the analysis of factual data and information.

- **Mutually beneficial supplier relationships**

A mutually beneficial relationship enhances the ability of both the organisation and its suppliers to create value. Synergy can be found in mutually beneficial supplier relationships.

- **Continuous improvement**

There should be a permanent institutional objective recognising and acting on the fact that no process is so good that further improvement is impossible.

2.11.3 Clauses of ISO 9001:2000

Goetsch and Davies (2002) state that ISO 9001:2000 has eight clauses; the major five clauses are discussed briefly below:

- **Quality management system (clause # 4)**

To develop a system of documentation that enables an organisation to be led and managed in a systematic and visible manner.

- **Management responsibility (clause # 5)**

Top management commitment is essential for developing and maintaining an effective and efficient quality management system that achieves benefits for interested parties and increases customer satisfaction. The documentation system has to undergo periodic review to ensure ongoing maintenance of the system.

- **Resource management (clause # 6)**

Top management has the responsibility of ensuring that the resources required to meet the objectives of the organisation are provided. These resources include people, infrastructure, work environment, information, suppliers and partners, natural resources and financial resources.

- **Product and service realisation (clause # 7)**

This involves the effective and efficient operation of realisation and support processes, as well as outsourcing activities. This requires the identification of the inputs, processes and outputs necessary to fulfil the customer's needs.

- **Measurement, analysis and improvement (clause # 8)**

This is the system of audits, corrective actions, monitoring and measurement, as well as continuous improvement, that allows for decisions based on factual information or data.

2.12 EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT (EFQM) MODEL

The EFQM Model's criteria can be used to draw up the final list that is part of the objectives of this study. The use of the model is directed at achieving excellence (EFQM, 2006).

2.12.1 Overview of the European Foundation for Quality Management Model (EFQM)

While the BNQP has been adopted by the senate of the United States of America (US NIST, 2004), the EFQM stipulates that the European Foundation for Quality Management Model has been adopted as the standard for quality in Europe (EFQM, 2006).

The EFQM Excellence Model illustrated in figure 2.8 was introduced at the beginning of 1992 as a framework for assessing organisations for the European Quality Award. The EFQM is a practical tool that can be used in a number of ways, including self-assessment, benchmarking against other institutions, identifying areas of improvement, a basis for a common vocabulary and a way of thinking, and as a structure for the organisation's management system (EFQM, 2006).

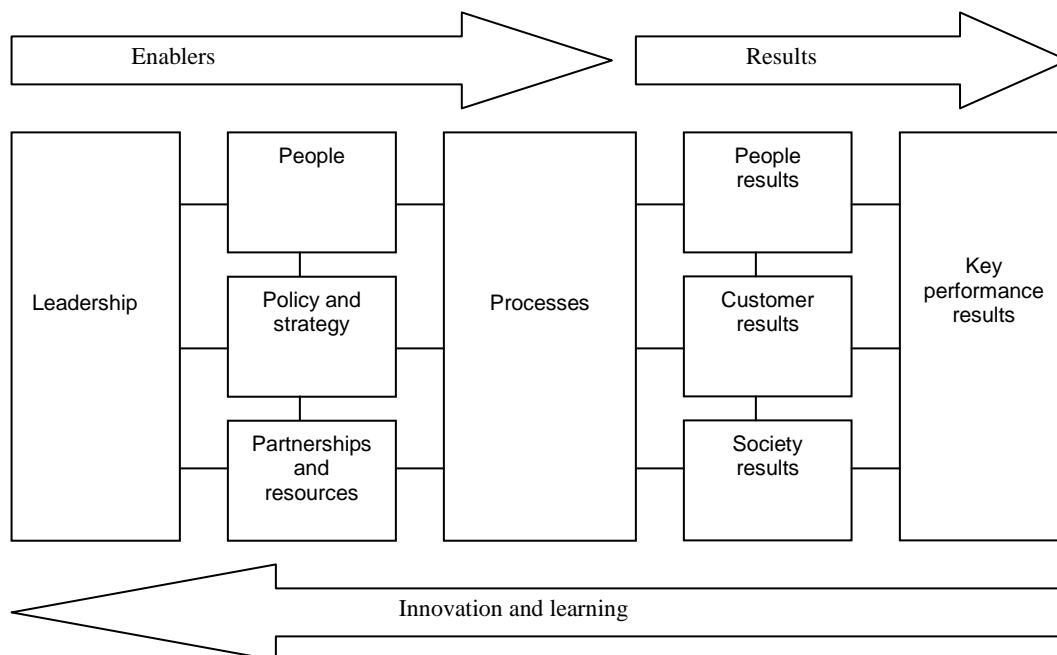


Figure 2.8: European Foundation Quality Model
Source: EFQM, 2006

2.12.2 Principles of the European Foundation for Quality Management Model (EFQM)

The EFQM Model is a non-prescriptive framework based on nine criteria. Five of these are “enablers” and four are “results”. The “enabler” states what an institution does, while the “results” state what an institution achieves. “Results” are caused by “enablers” and “enablers” are improved using feedback from “results” (EFQM, 2006).

The EFQM Model in higher education is described by Pupius (2000) as follows:

- **Continuous learning, innovation and improvement**

These elements embody the principle of self-evaluation or self-assessment. The institution will learn from the feedback it receives by reviewing the impact of strategies and actions, trends in results, and performance against target and by comparing them with the best in the class by benchmarking.

- **Customer focus**

In education, customers include students, employers, parents, businesses, local, regional and national agencies and research-funding bodies. Loyalty would be measured in terms of propensity to recommend the institution.

- **Leadership and constancy of purpose**

Leaders include Deans, Heads of departments, academic staff who teach students and all administrative Directors and managers. The institution should have a strategic vision that will be shared with all staff and students. This is about ‘walking the talk’ and ‘living the values’.

- **Management by processes and facts**

Each process has an identified owner and a standards measurement framework is put in place. Institutions adopting these principles would identify, map and model key processes and the way they relate to elements of the systems hierarchy.

- **Partnership development**

This encompasses the collaboration and partnerships with other tertiary institutions, and business and local organisations.

- **People development and involvement**

Trust is necessary for an effective working process that involves improvement teams and process improvement.

- **Public responsibility**

Defining a role within a local community, region or country to enhance the social and economic wellbeing of the people becomes the responsibility of the public.

- **Results orientation**

Emphasis would be placed not just on academic outcomes or quality assurance results, but also on the results of student and staff surveys, and impact and community surveys.

2.12.3 Criteria of the European Foundation for Quality Management (EFQM) Model

Elements of the EFQM Model are described by the HBO Expert Group (1999) as follows:

- **Leadership**

Leadership indicates how management at the relevant institutional level displays leadership qualities in terms of behaviour and manner of intervention.

- **People management**

People management refers to both the quantitative aspect of personnel planning and to the quality of all facets of the personnel policy.

- **Policy and strategy**

Policy and strategy refers to the values, vision and strategic planning of the institution, which are all covered in this element.

- **Partnerships and resources**

Partnerships and resources indicate how the organisation makes use of supporting resources in order to achieve the most advantageous results.

- **Processes**

The identification of external analysis, vision, curriculum, study course components, controlling, planning, student activities, lecturer activities, study career and internal analysis is integral to an educational organisation's success.

- **People results**

This element is subdivided into task and function (staff development), work environment (staff work conditions) and aspects concerning the institution (involvement of staff).

- **Customer results**

To determine to what extent the customers of the institution are satisfied: it distinguishes between student and general customer satisfaction.

- **Society results**

Impact on society indicates how the institution regards its position and function in a society, and how interested parties in that society appraise the institution.

- **Key performance results**

Business results indicate the development of the institution, with regard to financial business results and operational business results.

2.13 PARASURAMAN GAP MODEL AND ASSOCIATED VARIANTS

The Gap Model was selected to investigate criteria that can be used for support systems (Parasuraman, Zeithaml and Berry, 1985). These criteria need to be understood when doing quality evaluations.

2.13.1 Overview of the Parasuraman Gap Model and associated variants

In the Gap Model, differences between service expectation and service delivery are confirmed as a management principle. In service delivery, it is useful to identify critical criteria in the value chain (Porter, 1985), as it is at this point that the customer comes into contact with the institution.

The Parasuraman Gap Model (Parasuraman, Zeithaml and Berry, 1985) is illustrated in figure 2.9. It enables management to identify sources of quality, discover quality problems, pinpoint the causes of observed quality problems, and identify reasons for observed quality.

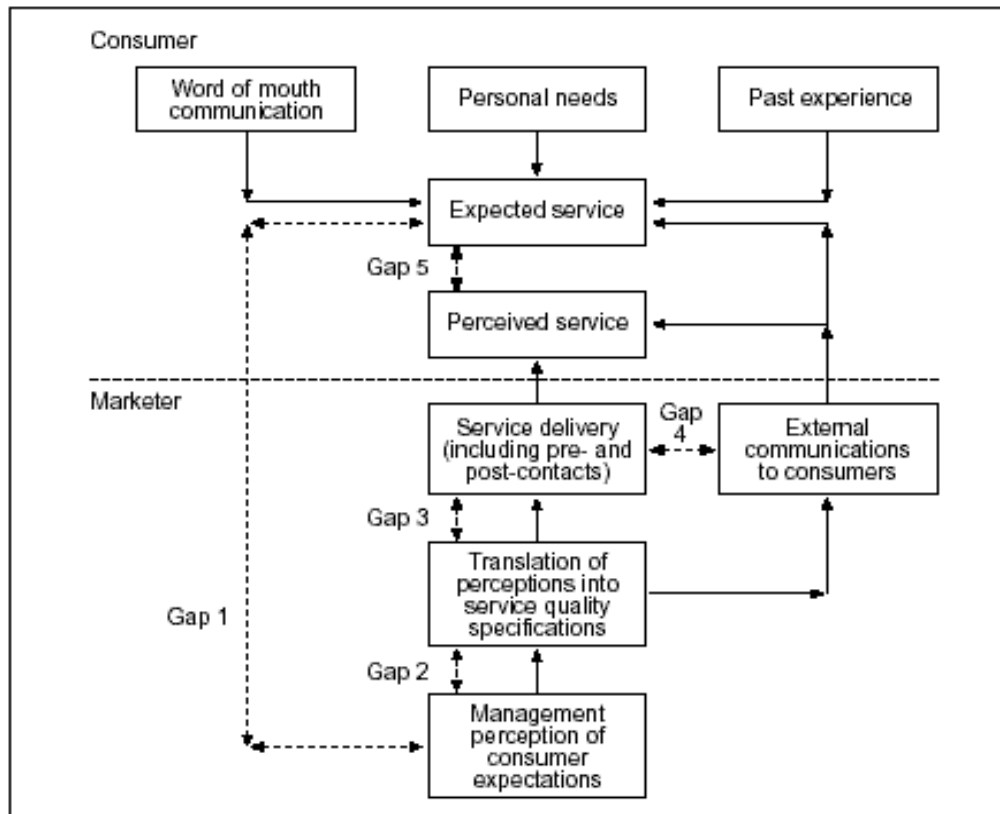


Figure 2.9: Parasuraman Gap Model
Source: Ghobadian *et al.*, 1994

2.13.2 Criteria of the Parasuraman Gap Model and associated variants

Edvardsson, Thomasson and Ovretveit (1994) and Ghobadian, Speller and Jones (1994) have expanded the definitions of these “gaps” as follows:

Gap 1: The gap between customer expectations and management’s perception of these expectations

In some instances, management may have inaccurate perceptions of what customers expect. The reason for this is given as a lack of proper market or customer focus.

Gap 2: The gap between management perception of customer expectations and the ability to translate these into service quality standards

Managers often understand customers' needs, but believe that they are unable to design quality standards to meet these needs. Such organisations may be unwilling to commit to the change in organisational systems required to meet the quality standards. This gap may therefore be referred to as the planning and design gap. Short-term objectives, such as cost reduction, market share and profitability are usually the focus, rather than developing a managerial style and organisational climate that fosters commitment in lower management levels and among personnel with whom they are in contact. Lack of suitable technology, financial constraints or unrealistic customer expectations can lead management to believe that it is impossible to meet customer expectations.

Gap 3: The gap between service quality specifications and the actual service delivery

Some institutions may fall short of delivering the standards they have set for themselves. Service performance relies on the willingness of front-line and support staff to provide service excellence. However, there may be various reasons why employees are unwilling or unable to deliver a service.

Role ambiguity occurs when an employee does not possess the knowledge and training required to do his/her job adequately. He/She does not understand how to satisfy the customer's or the manager's expectations and this often results in high labour turnover and low morale.

Role conflict, on the other hand, occurs when the employee perceives that he/she cannot satisfy the demands of the individuals who are served. The employee may understand that customers require personalised attention, while at the same time realising that his/her time is limited in order not to keep other customers waiting. Customers are often rude and demanding and the sheer numbers of customers may lead to role conflict among front-line staff.

Gap 4: The gap between service delivery and external communications

The lack of formal and informal feedback may lead to such a gap between service delivery and external communications occurring. If the marketing department develops advertising campaigns independently from other departments that are expected to deliver the service, staff may be unable to deliver on the promises required to meet customer expectations. The human resources department is required to motivate, train and compensate employees and needs to be integrated into the organisation's overall game plan. A major problem in large organisations with multiple business units is the inconsistency in policies and procedures between departments that operate with a relative degree of autonomy.

Gap 5: The gap between the quality the customer perceives in a service and his/her expectations

Customers may perceive facilities in periods of peak demand to be inadequately resourced, whereas in reality facilities may be operating at approximately 50 percent capacity over the rest of the working week. Perceived quality of service depends on the size and direction of Gap 5, which, in turn, depends on the nature of the gaps connected with marketing, design and delivery of services.

Parasuraman *et al.* (1985) conclude that customers' perceptions depend on comparing prior expectations of the service with what they receive, therefore, Perceived Service Quality (PSQ) = Perceptions (P) – Expectations (E).

Theoretically three possibilities may result from this comparison:

- The customer may be satisfied with the service when perceptions exceed expectations (P>E).
- The customer may be fairly satisfied with the service when perceptions are more or less equal to expectations (P=E).
- The customer may be dissatisfied with the service when perceptions are lower than expectations (P<E).

According to Parasuraman *et al.* (1985), customer expectations are based on three issues:

- word-of-mouth communication; what customers have been told by others
- prior experience of the service
- the customer's personal needs at the time.

Soutar and McNeil (1996) conducted a pilot study at a university of technology in Australia using the Servqual Model. The study investigated students' views on academic and administrative quality at the institution. The gap between perceived service and expected service was computed for administrative and academic units. Regression analysis was used to determine the dimensions of overall satisfaction. In their research, administrative service quality was found to be unsatisfactory.

Gaps were identified in all areas (Reliability, Tangibles, Responsiveness, Assurance, Empathy, Communication and Systems). Students regarded enrolment procedures and parking as very poor, and were also dissatisfied with the following determinants: Knowledge, Communication, Tangibles

and Individualised Attention. The reason for this negative assessment of the university's administration may have been because of a lack of communication with administrative staff.

Ghobadian *et al.* (1994) examine the underlying concept of "service quality" and review several of the "service quality improvement models" with the aim of bringing all these ideas and models together in order to discuss potential obstacles to service quality improvements. The models below are all taken from the study. The service quality improvement models in table 2.1, describes the five models and their primary focus.

Table 2.1: Service quality improvement models

| Model | Primary focus of the model |
|----------------------------|---|
| Quality gap analysis | A diagnostic management tool that facilitates the identification of several salient quality gaps; this is useful in attempting to improve the quality of the offering. |
| Organisational service | This model provides a framework for launching an overall quality improvement programme. It highlights the steps involved in an organisational quality drive and the factors pertinent to each stage. |
| Service quality trade-offs | This model facilitates the identification of quality trade-offs using three salient service attributes. These are degrees of customisation, labour intensity and contact and interaction. |
| Service journey/processing | Operational issues are depicted as the stages in a service journey. They also attempt to show the impact of the service experience at each stage on the formation of expectations and the perception of quality. These models are useful in highlighting the operational areas of a service organisation that influence the quality issues. |
| Behavioural | This model stresses the importance of the delivery personnel's behaviour for perceived quality. The vital quality factor, according to this model, is the balance between customer expectations and staff expectations. The model also stresses the importance of the service delivery system. |

Source: Adapted from Ghobadian *et al.*, 1994

Five models were examined, each with a different focus and emphasis. It was found that the Gap Model was the most commonly used. A quality model should ideally enable management to

identify sources of quality improvement, to discover quality problems, to identify causes of the quality problems and to suggest possible actions for rectifying the problems (Ghobadian *et al.*, 1994). There are various determinants of quality and, according to Gronroos (1978), quality has three dimensions:

- Technical quality of outcome – the actual outcome experienced by the customer; the service outcome can often be measured by the customer.
- Functional quality of the service encounter – how the customer receives the service. This is often perceived subjectively.
- Corporate image – the customers' perceptions of the institution. The institution's image depends on the technical and functional quality, price, external communication, physical location, appearance of the site, and the competence and behaviour of employees.

Cheng and Tam (1997) propose seven models for education: the Goal and Specification Model, the Resource Input Model, the Process Model, the Satisfaction Model, the Legitimacy Model, the Absence of Problems Model and the Organisational Learning Model. The usefulness of these models is limited and they are not universally adaptable.

The interrelationship of the models as a system, including input, process and output in the form of a chain and the performance of each part influencing the other, is also suggested by the Coetzee Model (Coetzee, 1995). The goals of an educational institution can reflect the expectations of the customer. The Resource Model looks at institutional processes versus outcomes, whereas the Process Model looks at internal processes. The Goal and Specification Model focuses on the goals and their outcomes, and the Satisfaction Model deals with the satisfaction of the constituencies concerned. The Legitimacy Model involves relationships with communities and is aimed at building a public image. Institutions may try to achieve their own quality criteria, but poor performance and ineffectiveness may emerge if they are ignorant of other criteria.

2.14 SOUTH AFRICAN EXCELLENCE MODEL (SAEM)

The SAEM assesses the excellence of an organisation. It involves all the people in the organisation in constantly improving their processes. This model was chosen because it builds on the EFQM and the BNQP. The criteria of the SAEM will be used to contribute to the list of criteria for various administrative support services, which is one of the objectives of the study.

2.14.1 Overview of the South African Excellence Model (SAEM)

The SAEM Model contains 11 self-assessment criteria which is depicted in figure 2.10, and suggests a number of approaches to self-assessment. The model facilitates the development of self-assessment of performance excellence by applying criteria contained in the model. Aiming for performance excellence is the best route for achieving a competitive advantage and organisations that have pursued excellence have generally done so by implementing quality improvement processes. This model enables the organisation to assess its performance objectively against a number of internationally recognised criteria, identify the strengths of the organisation, single out areas for improvement, set improvement plans in action and repeat the process (SAEF, 1997).

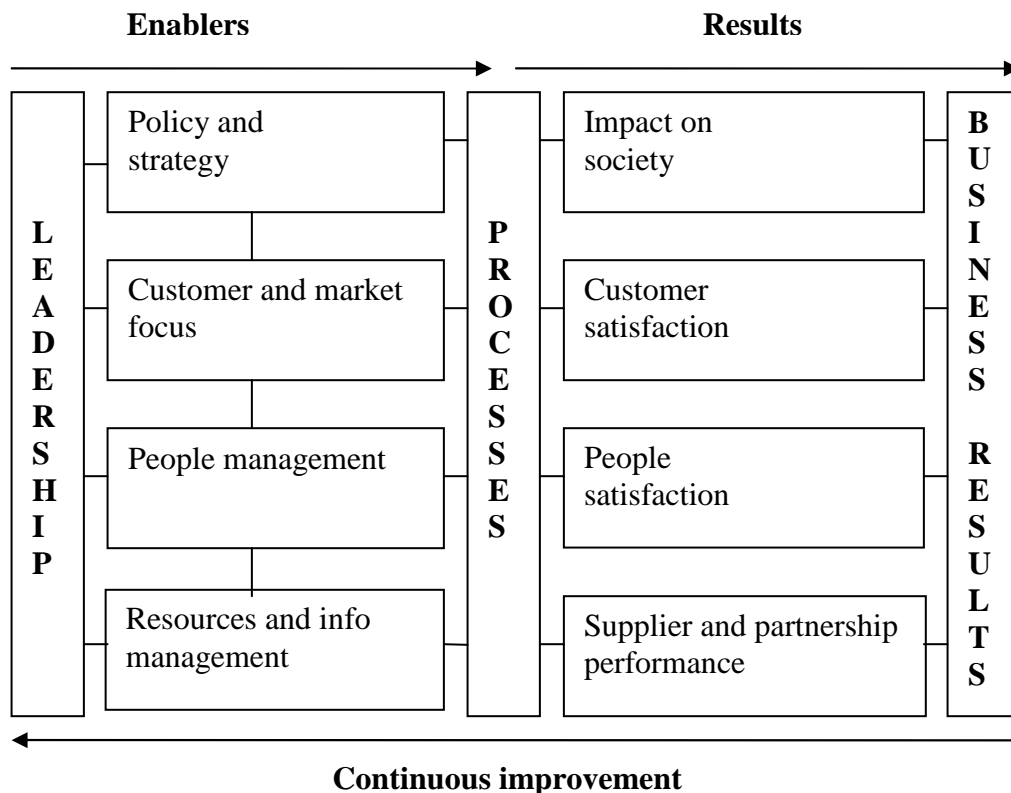


Figure 2.10: South African Excellence Model

Source: SAEF, 1997

2.14.2 Principles of the South African Excellence Model (SAEM)

The SAEM attempts to instil an operating philosophy that reflects values including a passion for excellence, integrity, pursuing strength in diversity, ubuntu, adding value, willingness to improve and transparency. These values and concepts are the foundations for integrating key business requirements into a results-oriented framework (SAEF, 1997).

The SAEF (1997) shows that the core principles underpinning the model are as follows:

- **Leadership**

Creating strategies that set direction, tangible values and high expectations, and which encourage people to excel.

- **Results orientation**

Excellence is dependent on balancing and satisfying the needs of all relevant stakeholders.

- **Customer-driven product and service**

The customer is the final judge of the product quality and service features and characteristics.

- **People development**

This is the focus on people development and their involvement in attaining the goals of the institution.

- **Continuous improvement**

This relates to incremental change and becomes part of the culture of the institution.

- **Continuous learning**

This entails adaptation to change, which leads to new goals and approaches as part of continuous learning.

- **Management by fact**

Measurements must derive from the organisation's strategy and provide critical data and information about key processes, outputs and results.

- **Valuing employees**

This involves investing in the development of the workforce as a strategic initiative by valuing human capital.

- **Developing partnerships**

Partnerships are developed both inside and outside the institution, as stakeholders are of strategic importance.

- **Waste prevention**

This entails the prevention of waste by building quality into processes, products and services.

- **Long-range view**

A long-range view of the future is taken in order to pursue market leadership and long-term commitment for key stakeholders.

2.14.3 Criteria of the South African Excellence Model (SAEM)

In their document, the South African Excellence Foundation discusses the SAEM model and a brief overview of the key elements follows below (SAEF, 1997).

- **Leadership**

The behaviour and actions of the executive and team and all other leaders inspire, support and promote a culture of performance excellence.

- **Policy and strategy**

This is the way in which the organisation formulates, deploys and reviews policy and strategy and turns them into plans and actions.

- **Customer and market focus**

This is how the organisation determines the needs, requirements and expectations of its customers and markets, enhances relationships with them and determines their satisfaction.

- **People management**

The people management processes implemented by the organisation release the full potential of its people to achieve the goals of the institution.

- **Resources and information management**

This is the way in which the financial and material resources, information technology and knowledge are managed by the organisation.

- **Processes**

This element is concerned with the way in which the organisation identifies, manages, reviews and improves its processes.

- **Impact on society**

This element describes what the organisation is achieving in satisfying the needs and expectations of the local, national and international community at large.

- **Customer satisfaction**

This element refers to the processes in the organisation that are aimed at achieving the satisfaction of its internal and external customers.

- **People satisfaction**

These are the processes and strategies employed by the organisation in order to satisfy its people.

- **Supplier and partnership performance**

These are the management processes that have been put in place in an organisation to direct the supplier and partnering processes.

- **Business results**

This element, business results, describes what the organisation is achieving in relation to its planned business objectives and in satisfying the needs and expectations of everyone with a financial interest or other stake in the organisation.

2.15 SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

The core criteria that training providers need to satisfy in order to develop a quality management system for their institution are specified by SAQA and providers need to conform to these criteria in order to receive accreditation (SAQA, 2001).

2.15.1 Overview of the South African Qualifications Authority (SAQA)

The South African Qualifications Authority Act of 1995 defines an education and training provider as a body that delivers learning programmes that culminate in specified National Qualifications Framework standards and/or qualifications, and that manages their assessment (SAQA, 2001). Details of this framework are given below as per SAQA (2001).

2.15.2 Criteria of the South African Qualifications Authority (SAQA)

- **Policy statement**

The policy statement spells out the organisation's aims, objectives and purposes.

- **Quality management systems**

Quality management systems identify processes and outline procedures for implementing quality management in the organisation.

- **Review mechanisms**

Review mechanisms outline the ways in which the implementation of policies are monitored.

- **Programme delivery**

Programme delivery outlines how learning programmes are developed, delivered and evaluated.

- **Staff policies**

Staff policies outline the policies and procedures for staff selection, appraisal and development.

- **Learner policies**

Policies and procedures for selecting learners are outlined, as well as the way in which learners should be given guidance and support. The words learners and students are used interchangeably throughout the thesis.

- **Assessment policies**

Assessment policies outline policies and procedures for different forms of assessments and how they should be managed.

- **Management system and policies**

The management system and policies indicate the financial, administrative and physical structures and resources of the organisation, as well as policies of accountability within it.

2.16 HIGHER EDUCATION QUALITY COMMITTEE (HEQC)

In this section, the criteria for the Higher Education Quality Committee (HEQC) will be discussed and a review of this will assist panel members in guiding evaluations during institutional audits and reviews.

2.16.1 Overview of the Higher Education Quality Committee (HEQC)

The HEQC is a sub-committee of the Council on Higher Education (CHE). The purpose of the HEQC is to ensure that institutions of higher learning provide the required quality. The HEQC provides target areas, which give support for teaching and learning, research, community engagement, and the interaction of quality management with institutional planning and resource allocation to form key pillars of non-academic support. In addition, stakeholder surveys and benchmarking are proposed as tools for understanding and improving support quality (CHE, 2004b).

In assessing the extent to which non-academic quality review issues have been formalised within the context of South African higher education, it is useful to discuss the HEQC's institutional audit criteria.

2.16.2 Criteria of the Higher Education Quality Committee (HEQC)

The CHE introduces certain general and institutionally relevant criteria within the context of auditing (CHE, 2004b). These criteria are shown below:

- **Value for money**

This is the extent to which the institution offers its learners and stakeholders value for money.

- **Fitness for purpose**

This entails ensuring that the tasks performed in the institution are aligned with the purpose of the institution.

- **Transformation**

This is the extent to which changes in the country are being accommodated at the institution.

- **Institutional mission – links between planning, resource allocation and quality management**

This entails the fitness of purpose of the mission of the institution in response to the local, national and international context (including transformational issues). It includes links between planning, resource allocation and quality management.

- **Use of benchmarking, user surveys and impact studies at the institution**

This would be the extent to which the institution engages in benchmarking, where appropriate, and draws on user surveys and impact studies for the purposes of planning and setting priorities for quality development and enhancement.

The CHE document “Criteria for Institutional Audits” (CHE, 2004b) states the core functions of an institution, but there is also a need to ensure that the support services of an institution have criteria as well. Examples of support needs that should be included are summarised from the document as follows:

- **Academic planning**

A well-developed academic plan should be implemented efficiently.

- **Quality management mechanism**

Quality management mechanisms should ensure and enhance the quality of teaching and learning.

- **Quality improvement plan**

A quality improvement plan with set priorities, and adequate resourcing, timeframes and indicators of success should be institutionalised.

- **Staff development policies**

There should be staff development policies in place that promote the competence of staff.

- **Student access**

Mechanisms should be in place for promoting access to learners from marginalised groups.

- **Student management information system**

There should be a system in place for storing and updating detailed information about learners in order to inform policy, planning, implementation and review at all levels.

- **Efficient structures and procedures**

Efficient structures and procedures should be present to ensure the “integratedness” of academic provision and academic support.

- **Staffing**

Academic services should be adequately staffed and the necessary infrastructure should be in place. The institution should provide development opportunities for support staff to update their expertise and keep abreast of developments in their field.

- **Resourcing**

Academic services should be adequately resourced in order for them to fulfil their functions properly.

- **Certification**

Systems for managing the processing and issuing of certificates should be in place.

- **Student support and development**

Systems for student support should focus on empowering learners to take personal control of their own development by providing opportunities for the exercise of choice, decision making and responsibility within a supportive environment in order to promote autonomous learning. Educational, personal and vocational guidance should be committed to and demonstrate ethical ways of working, and offering impartial, confidential support and advice; it should also be available and accessible to all learners, at all stages from pre-entry to career decisions. Guidance arrangements should rest on an assumption of equality of opportunity for all learners, with additional resources and strategies invested in those learners who are likely, for whatever reason, to be disadvantaged in their learning or career development (HEQC, 1996).

- **Student representation and communication**

The ability of staff, learners and other stakeholders to contribute to quality assurance processes for awards and the learning environment is ensured by the creation, development, accessibility and effective use of opportunities for representation.

Institutions need to develop a means of identifying complaints and grievances, and mechanisms through which some of the difficulties can be resolved. In cases where complaints and grievances are upheld, institutions should take action to offer individual redress and/or to change current systems and practices, and to make these changes known (HEQC, 1996).

The relevance of the above criteria is that they can be used when evaluating Support Systems.

2.17 COETZEE MODEL

This section gives an overview of the Coetzee Model, and its principles and criteria will be discussed. The criteria contained in the Coetzee Model (Coetzee, 1995), as depicted in figure 2.11, will be compared with those of other models, since the study requires the drawing up of a list of evaluation criteria for support systems.

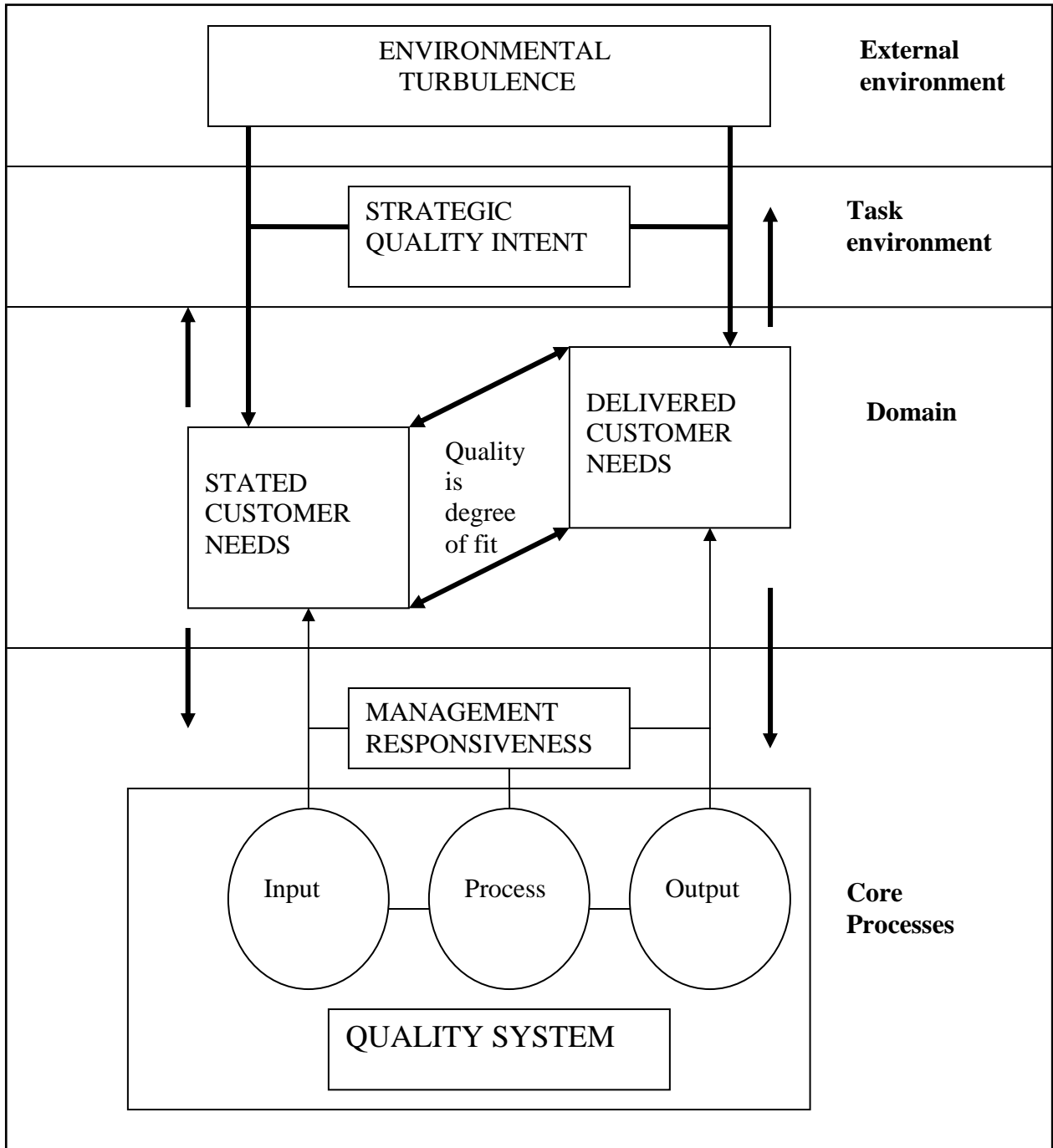


Figure 2.11: Coetzee Model

Source: Coetzee, 1995

2.17.1 Overview of the Coetzee Model

The criteria mentioned in the models that have been discussed, such as BNQP, ISO 9001:2000, SAEM, EFQM, Gap Model, HEQC's Institutional Audit Criteria and SAQA, will be used together with those of Coetzee's Model in order to develop the Support Systems model for this study.

The interrelationships in the model between stated customer needs and delivered customer needs which form a system, with input, process and output forming a chain and the performance of one part influencing the other, are also included in the Coetzee Model.

2.17.2 Principles of the Coetzee Model

In the Coetzee Model (Coetzee, 1995), as shown in figure 2.11, the organisation's environment is divided into four areas. These are the external environment, the task environment, the domain and the core process. The most fundamental function of the organisation is the core process, with the domain, task environment and external environment each exerting an influence from the sidelines. A brief description of each of the areas follows as per Coetzee (1995):

- **External environment**

The external environment of the institution includes economic factors, the social milieu, the political conditions, the legal structure of the society in which the institution finds itself, the technological spectrum and the ecological situation.

- **Task environment**

The task environment is unique in that no agreements have been reached with either suppliers or customers. The task environment essentially influences the strategic choices of the domain with respect to potential student intake, markets and communities to be serviced and the overall strategic approach of the institution.

- **Domain**

The domain of the institution refers to agreements already reached with regard to inputs from and outputs to the institution's environment. The domain states the institution's claim with respect to the range of qualifications offered and types of market served. In a sense, it attempts to equate "what the customer wants" with "what the customer gets". The domain includes suppliers, customers, staff, contractors and subcontractors. It is an area of greater

uncertainty than the core processes, but its relative stability with regard to student, staff and supplier agreements protect the core process from the task and external environment. The choice of domain allows an institution to reduce or increase the impact of environmental uncertainty on the institution.

- **Core processes**

The core processes may be described as that part of the institution that is directly relevant to the primary activities for achieving goals. Primary activities for a higher education institution include inbound logistics of inventory, staff and learners, key processes such as teaching, research and community service, and outbound logistics such as graduates.

2.17.3 Criteria of the Coetzee Model

The criteria of the Coetzee Model (Coetzee, 1995) are described below:

- **Environmental turbulence**

Environmental turbulence comprises factors in the environment that may affect the institution, such as legislation covering the HEQC and SAQA.

- **Strategic quality intent**

Strategic quality intent is an indication of the way management at the relevant institutional level makes provision for a strategic plan.

- **Customer focus**

Customer focus means that “what the customer wants”, “the customer gets” by delivering on the stated customer needs.

- **Management responsiveness**

This entails management’s control of the quality system consisting of inputs, processes and outputs.

2.18 SERVICE QUALITY

There is a separate set of service quality criteria that can be used for support systems during evaluations (Parasuraman *et al.*, 1985). Defining the quality of a service is more difficult than defining quality in manufacturing, since there is nothing tangible to be shown in the service industry. Quality is the difference between the perception and expectation measured.

Service quality is looked at for the following reasons:

- Strategic plans should include goals and actions of service quality issues
- Critical service quality criteria are identified for each support unit and key customers
- Service quality criteria can be used as benchmarks of good practice
- Service quality is evaluated across campus by student satisfaction surveys
- A formalised process for corrective and preventative action is developed.

The evaluations that are carried out during audit processes determine whether service quality is satisfactory. Services were first defined by Rathmell (1966). Gronroos (1982) introduced the concept of perception minus expectation and Parasuraman, Zeithaml and Berry (1985) then developed their Gap Theory. Edvardsson *et al.* (1994) gives an alternative definition called 'right quality' compared to Rathmell (1966) who defined services as behavioural.

More focus should be placed on people. Learning and change management should be emphasised as they are key to the success of an institution (Deming, 1986). A people-focus invariably means that an institution's staff needs to acquire an understanding of the concept of service quality. The literature on the topic has progressed and various authors are showing a greater interest in service quality. In the history of this literature the similarities lie in the dimensions of Parasuraman *et al.* (1985) and Parasuraman *et al.* (1988). The service quality dimensions can be used as criteria for evaluating support systems.

Rathmell (1966) and Hill (1995) define services as behavioural and describe them as deeds, performances or effort. Gronroos (1982) developed a perception minus expectation concept of service quality, referred to as the Gap Model, which was also used by Parasuraman *et al.* (1985). Customers' perceptions depend on their comparison of their prior expectations of the service with that which they receive, that is, perceived service. Thus, service quality and productivity depend not only on the performance of the service provider's personnel, but also on the performance of the

customer, which again may make quality management problematic. In addition, many service encounters require close personal interaction between a service provider and his or her customer.

Gronroos (1983) argues that there are two types of institutional service quality, namely:

- technical quality; which is what the customer is actually receiving from the service
- functional quality; which involves the manner in which the service is being delivered.

Lehtinen and Lehtinen (1983) view service quality as an interaction between the customer and the elements of the service institution. They add three additional quality dimensions to the two types of service quality discussed in Gronroos (1983). These are identified as

- physical quality; which includes physical aspects of service
- corporate quality; which involves institutional image or profile
- interactive quality; which is derived from customer interaction.

Berry, Zeithaml and Parasuraman (1985) state that perceptions of service quality result from comparing expectations prior to the service with the customer's actual experience of the service. If the customers' expectations are met, service quality is perceived as satisfactory; if they are not met, then it is perceived as unsatisfactory.

Edvardsson *et al.* (1994) have taken Berry *et al.*'s (1985) definition a step further and defined the term "right quality" as meeting the specifications or requirements that were laid down for the service on the basis of the customers' demands and needs, and of fulfilling the customers' expectations.

Hill (1995) states that, in the literature, there is fairly widespread agreement that quality differentiates services from manufacturing goods. Services are noted as intangible, perishable, inseparable from production and consumption, and heterogeneous. One distinctive aspect of such services is that customers are often part of the production and delivery processes. In higher education, the variables of service quality include expectations, perceived service performance, disconfirmation, and the relationship between customer satisfaction and perceived service quality. Disconfirmation is defined as the disparity between the customers' expectations and perceived service performance. Knowing what customers expect is the first, and possibly the most critical step in delivering service quality. Such needs and expectations are influenced by word-of-mouth communications (what customers hear from other customers), personal needs (determined by

customers' characteristics and circumstances), past experience of the service (or a related service) and external communications from the service provider. One of the problems facing providers seeking to improve service quality is that a body of meaningful performance measures does not exist. In the United Kingdom, learners are viewed as the primary customers of higher education, thus one approach to service quality management that to some extent circumvents the performance measure difficulty would be to attempt to align, as closely as possible, learners' expectations with their perceptions of service performance. In this research, the following non-academic points of student satisfaction were discussed: computing facilities, library services, university bookshop, careers services, counselling/welfare, financial services, health services, accommodation services, learners' union, catering services and physical education.

Kwan and Ng (1999) state that some institutions use the Service Quality Measuring Index (Servqual) as developed by Parasuraman *et al.* (1985) to measure the quality of service offered. Table 2.2 shows how Servqual was used during this study in that some of the measurements are used as criteria in the methodology. The Servqual dimensions are relevant to this study when placed under appropriate headings and their measurement is done on a one-to-five scale. Kwan and Ng (1999) claim that for example, learners from Hong Kong who are more pragmatic may place less value on campus life as an indicator of quality of education, and more value on assessment. The following non-academic indicators were identified by their study: concern for learners, facilities and social activities. Concern for learners includes advisors' availability, advisors' interest in learners' progress and the development of learners' course plans by advisors. Facilities include places that are quiet and available for study purposes, facility cleanliness, availability of library facilities and suitable relaxation areas for learners. Social activities include clubs that can be joined and social events for learners.

Table 2.2: Servqual Expectation Survey

| | Strongly Disagree | Strongly Agree |
|---|--------------------------|-----------------------|
| 1. Excellent organisations will have modern-looking equipment. | 1 | 7 |
| 2. The physical facilities at excellent organisations will be visually appealing. | 1 | 7 |
| 3. Employees at excellent organisations will appear neat. | 1 | 7 |
| 4. In an excellent organisation materials associated with the service (such as pamphlets or statements) will be visually appealing. | 1 | 7 |
| 5. When excellent organisations promise to do something by a certain time, they will do so. | 1 | 7 |
| 6. When a customer has a problem, excellent organisations will show a sincere interest in solving it. | 1 | 7 |
| 7. Excellent organisations will perform the service right the first time. | 1 | 7 |
| 8. Excellent organisations will provide their services when they promise to do so. | 1 | 7 |
| 9. Excellent organisations will insist on error-free records. | 1 | 7 |
| 10. Employees in excellent organisations will tell customers exactly when services will be performed. | 1 | 7 |
| 11. Employees in excellent organisations will give prompt service to customers. | 1 | 7 |
| 12. Employees in excellent organisations will always be willing to help customers. | 1 | 7 |
| 13. Employees in excellent organisations will never be too busy to respond to customers' requests. | 1 | 7 |
| 14. The behaviour of employees in excellent organisations will instil confidence in customers. | 1 | 7 |
| 15. Customers of excellent organisations will feel safe in their transactions. | 1 | 7 |
| 16. Employees in excellent organisations will be consistently courteous with customers. | 1 | 7 |
| 17. Employees in excellent organisations will have the knowledge to answer | 1 | 7 |

| | Strongly Disagree | Strongly Agree |
|---|--------------------------|-----------------------|
| customers' questions. | | |
| 18. Excellent organisations will give customers individual attention. | 1 | 2 3 4 5 6 7 |
| 19. Excellent organisations will have operating hours convenient to all their customers. | 1 | 2 3 4 5 6 7 |
| 20. Excellent organisations will have employees who give customers personal attention. | 1 | 2 3 4 5 6 7 |
| 21. Excellent organisations will have the customers' best interests at heart. | 1 | 2 3 4 5 6 7 |
| 22. The employees of excellent organisations will understand the specific needs of their customers. | 1 | 2 3 4 5 6 7 |

Source: Parasuraman, Zeithaml and Berry, 1988

Parasuraman *et al.* (1985) identify 11 quality factors associated with service dimensions. A brief definition for each dimension follows in table 2.3.

Table 2.3: Service dimensions

| Dimension | Description |
|----------------------|---|
| Reliability | Consistently perform the promised service dependably and accurately. |
| Responsiveness | Willingness of employees to help customers and provide prompt service. |
| Competence | Knowledge and skills of personnel in performing the service. |
| Accessibility | Approachability and ease of contact with the service institution and the personnel. It includes waiting time to receive service, convenient location and convenient hours of operation. |
| Courtesy | Consideration by the service personnel for the customer and any property belonging to the customer. It includes politeness, friendliness, neatness, cleanliness of contact personnel and respect. |
| Communication | Keeping customers informed in a language that they can understand and listening to them. It includes questioning the customer about needs, explaining the service, giving information during the course of service provision, assuring the customer that the problem will be handled and asking for feedback. |
| Credibility | Trustworthiness, honesty, having the customer's best interest at heart. Freedom from danger, risk or doubt. |
| Security | Safety of customers and their possessions, including confidentiality. |
| Knowing the customer | Making the effort to understand the customer's needs. It includes individualised attention and recognising the regular customer. |
| Tangibles | Physical evidence of the service. The appearance of personnel, cleanliness, tools or equipment used to provide the service, physical representation of the service product used in the service package, other customers in the service facility. |
| Customisation | Ability to adjust the service to meet the needs of the customer. |

Source: Parasuraman *et al.*, 1985

In further research, Parasuraman, Zeithaml and Berry (1991) refined their work on service quality to include the following five dimensions: reliability, tangibles, responsiveness, assurance and empathy and referred to them as the “dimensions of quality”.

Goetsch and Davies (2002) discuss the concept of service quality in relation to the application of ISO 9001:2000, and they define the characteristics of service quality as

- facilities, capacity, number of personnel and quantity of materials
- waiting time, delivery time and process times of administrative tasks
- hygiene, safety, reliability and security of customers
- responsiveness, accessibility, courtesy, comfort, aesthetics of environment, competence, dependability, accuracy, completeness, credibility and effective communication of learners.

It is evident from the review of the literature that Parasuraman *et al.* (1985) and Goetsch and Davies (2002) are in agreement with regard to quality dimensions such as reliability, responsiveness, competence accessibility, courtesy, communication, credibility, security and tangibles and are in disagreement on knowing the customer and customisation as part of service quality. Hill (1995), and Kwan and Ng (1999) are concerned with learners and facilities, while Goetsch and Davies (2002) are concerned only about facilities. All three authors have the facilities criterion in common.

Evaluation criteria for selected administration and support systems in South African higher education institutions could perhaps apply some of the above criteria to a particular support unit since service quality dimensions are important when dealing with customers.

2.19 DESCRIPTIONS OF THE MODELS

The descriptions of all the models discussed in this chapter are listed in table 2.4. A comparison of the criteria for each model is included in this discussion.

Table 2.4: Summary of quality management models

| Model | Description |
|----------------------|--|
| BNQP | Based on a framework of performance excellence that can be used by organisations to improve performance. Includes seven categories of criteria: “leadership”, “strategic planning”, “customer and market focus”, “measurement, analysis, and knowledge management”, “human resource focus”, “process management” and “results”. |
| ISO 9001:2000 | International standard for generic quality assurance systems. Concerned with continuous improvement through preventative action. Elements are customer quality and regulatory requirements, and efforts are made to enhance customer satisfaction and achieve continuous improvement. This model consists of eight principles and eight clauses. |
| EFQM | A non-prescriptive framework that establishes nine criteria (divided between enablers and results), suitable for any organisation for assessing progress towards excellence. |
| SERVQUAL | Instrument designed to measure consumer perceptions and expectations regarding quality of service in five dimensions: reliability, tangibles, responsiveness, assurance and empathy and to identify where gaps exist. |
| SAEM | The South African version of Europe’s Excellence Model. Self-assessment is used with this framework. This model has eleven criteria. |
| HEQC | The founding document of the CHE states that it is the responsibility of higher education institutions to make provision for quality. Ten criteria are related to support systems. |
| SAQA | Providers of training and education must ensure that they comply with the core criteria for quality to ensure that a certain quality standard has been maintained. This model has eight criteria. |

Brookes and Becket (2005) expanded the benefits and limitations of Total Quality Management (TQM) Models when applied to higher education in table 2.5.

Table 2.5: Total Quality Management Models applied to higher education

| BNQP | |
|--|---|
| <p>Benefits:</p> <ul style="list-style-type: none"> • Evident in operational elements; strategic and budget planning, careers, outreach and information services • May be immediate and long standing | <p>Limitations:</p> <ul style="list-style-type: none"> • It is primarily aimed at institutions based in the USA. |
| ISO 9001:2000 | |
| <p>Benefits:</p> <ul style="list-style-type: none"> • Quality certification can improve inter-departmental working conditions, student enrolment, and staff/supplier satisfaction. • Continuous improvement achieved through preventative action. | <p>Limitations:</p> <ul style="list-style-type: none"> • Scientific control is less achievable in higher education than in manufacturing. • Strategic planning is not that prominent |
| EFQM | |
| <p>Benefits:</p> <ul style="list-style-type: none"> • Integrated map of the management issues valued and useful for securing confidence of stakeholders. • Useful as a basis of self-assessment. • Tests relationship between enablers/results. | <p>Limitations:</p> <ul style="list-style-type: none"> • More relevant to service functions. • Dilemma of applying business language to public sector. • It may be 3 to 5 years before benefits are evident. • Challenges regarding managerial skills and top-level commitment in higher education. |

| SERVQUAL | |
|--|---|
| Benefits: <ul style="list-style-type: none"> • Enables assessment of internal and external customer views which is important in a competitive environment. | Limitations: <ul style="list-style-type: none"> • Student culture impacts on perceived importance of different elements of higher education and thus on perceptions of quality. • Performance indicators related to management processes but do not address education quality. |
| SAEM | |
| Benefits: <ul style="list-style-type: none"> • The use of this model demonstrates commitment to excellence in the South African organisation. | Limitations: <ul style="list-style-type: none"> • Not ideal for organisations operating globally as the framework is only supported in South Africa. |
| HEQC | |
| Benefits: <ul style="list-style-type: none"> • Places specific emphasis on higher education in South Africa. • Conformance to national legislation. | Limitations: <ul style="list-style-type: none"> • A new system that is evolving as a quality management system for institutions of higher learning. |
| SAQA | |
| Benefits: <ul style="list-style-type: none"> • Standards for primary, secondary and tertiary institutions are set by one body. | Limitations: <ul style="list-style-type: none"> • SAQA and HEQC criteria must be brought into alignment along with professional bodies. |

Source: Adapted from Brookes and Becket, 2006

Table 2.6: Model comparison

| Criteria | International models | | | | | National models | | |
|---|----------------------|-----------------------------------|----------------|--|-----------------------|--------------------------------|--|------------------------------------|
| | Coetzee Model | Baldrige National Quality Program | ISO 9001: 2000 | European Foundation for Quality Management | Parasuraman Gap Model | South African Excellence Model | South African Qualifications Authority | Higher Education Quality Committee |
| Environmental turbulence | √ | √ | X | X | √ | X | X | √ |
| Strategic quality intent – task environment | √ | √ | X | √ | X | √ | √ | √ |
| Stated customer needs – domain | √ | √ | √ | √ | √ | √ | X | √ |
| Delivered customer needs – domain | √ | √ | √ | √ | √ | √ | X | √ |
| Management responsiveness – core process | √ | X | √ | X | X | X | √ | √ |
| Input – core process | √ | √ | √ | X | X | X | X | √ |
| Process – core process | √ | √ | √ | √ | √ | √ | √ | √ |
| Output – core process | √ | X | √ | X | √ | X | √ | √ |

2.20 SUMMARY OF THE CRITERIA OF THE MODELS

It is evident from table 2.6 that there are a number of criteria that are common to the Baldrige National Quality Program (BNQP), the ISO 9001:2000, the European Foundation for Quality Model (EFQM), the Gap Model, the South African Excellence Model (SAEM), the South African Qualifications Authority (SAQA) and the Higher Education Quality Committee (HEQC).

“Environmental turbulence” is present in four of the eight models, namely the Coetzee Model, BNQP Model, Gap Model and HEQC. The “Strategic quality intent” criterion is present in six out of the eight models. “Stated customer needs” or “customer focus” and “delivered customer needs” or “customer satisfaction” are common to all of these above models except for SAQA. “Management responsiveness” is represented in the Coetzee Model, the ISO 9001:2000, the SAQA and the HEQC: which means it is present in four out of the eight models. The criteria of the BNQP, such as the “managements’ operational effectiveness”, “policy and strategy” of the EFQM Model and “policy and people management” criteria, should be added to “management’s responsiveness”. “Process” is a common criterion in all the models. It was also found that all of the models include “stated customer needs”, “delivered customer needs” and “process”.

It was therefore concluded that there was a fair degree of commonality between the criteria and hence they were used to develop a new model.

2.21 CHAPTER SUMMARY

In order to explore evaluation criteria for selected administration and support systems in South African Higher Education institutions, the criteria of the Coetzee Model were compared to international and national quality models namely. These models are listed as follows:

International models:

- Baldrige National Quality Program Model
- ISO 9001:2000
- European Foundation Quality Model
- Gap Model.

National models:

- South African Excellence Model
- Higher Education Quality Committee
- South African Qualifications Authority.

After the model comparison, it was decided to use the Coetzee Model as a foundation for further research in this study by improving it in chapter 3 to become a model suitable for support services. This will be shown in chapter 3. The next chapter will explore the research design and methodology for this study.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

This chapter covers two main areas, namely research instruments and tools, and the research design. Preliminary work in the form of a pilot study will be discussed and a revised model will also be developed.

3.1 RESEARCH INSTRUMENTS AND TOOLS

This section will define research methods, research instruments and research tools. It will also present the instruments and tools selected for this study. The research plan and design were developed in the context of the study and are illustrated in figure 3.1.

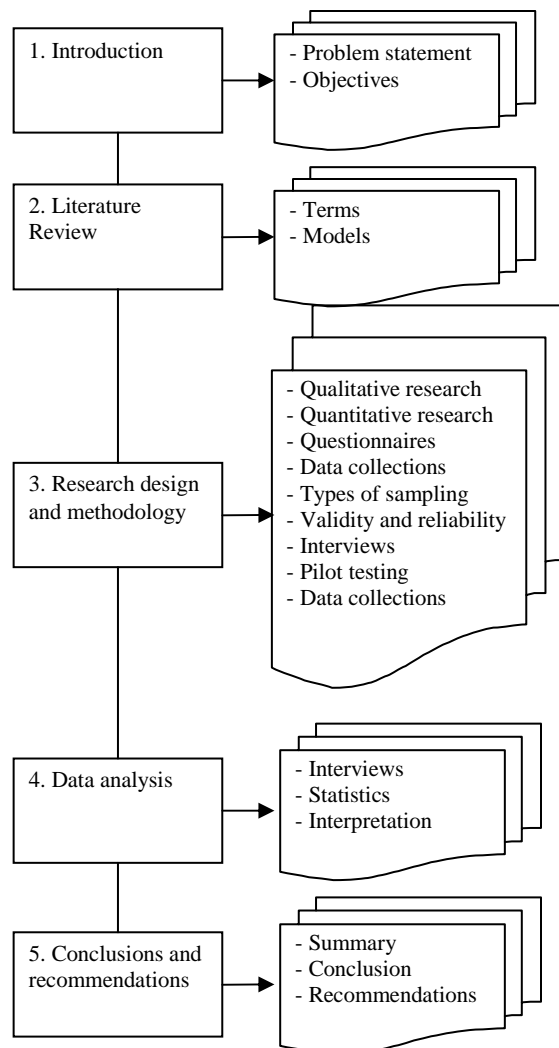


Figure 3.1: Flowchart of research development

Source: Adapted from Mouton, 2001

3.1.1 Qualitative research

Qualitative research investigates subjective data, and focuses on the experiential state of the participants and their perceptions of a situation (Strauss and Corbin, 1990).

One of the disadvantages of the qualitative method is that it is unable to support empirical judgements; however it can be employed to draw analytical conclusions (Maxwell, 1996). The advantage of this method is that it provides a greater range of insight, which improves the overall validity of the results. The objective of qualitative methods is to collect data and information and gain a better understanding of the research topic. The data gathered may be unstructured, at least in their raw form, but will tend to be detailed, and hence rich in content and scope (Fellows, 1997).

The literature reviewed includes national policies and models related to quality and their criteria, which will be used as in the study. The literature review will assist in formulating the questionnaire for the topic. This will represent the qualitative method of research in this study.

3.1.2 Quantitative research

Quantitative research makes use of numbers, measurements, experimental design and statistical analysis (Patton, 1997), and thus has the advantage of being able to draw statistical inferences, which enables the researcher to draw empirical conclusions about a population on the basis of a sample (Maxwell, 1996).

The data in this study will be collected by means of a number of self-administered structured questionnaires.

3.1.3 Questionnaires

A questionnaire is an instrument used for observing data beyond the physical reach of the observer (Leedy, 1993). It is important to consider the various forms of questions that will be posed. The type of question that is designed will depend on the objective that one wants to achieve (Leedy, 1997).

There are two types of questions: open-ended and closed-ended. Closed-ended questions usually allow the respondent to choose from two or more fixed alternatives. The type most frequently used is the dichotomous question, which offers two alternatives only: yes/no or agree/disagree. An additional response is offered, namely, “don’t know”, if the first two responses are not appropriate (Burns, 2000).

The decision to use questionnaires during this study was largely influenced by the views expressed by Burns (2000). One of the disadvantages applicable to the study that is mentioned below, that is, the respondent's motivation for answering the questionnaire, was overcome by the researcher making personal follow-up telephone calls to all the respondents after they had received the questionnaires. The advantages and disadvantages of questionnaires are listed in table 3.1. The analysis of the data obtained from the questionnaires will represent the quantitative method of research in this study.

Table 3.1: Advantages and disadvantages of questionnaires

| Advantages of questionnaires | Disadvantages of questionnaires |
|--|---|
| <p>They are less expensive to administer than face-to-face interviews.</p> <p>They are useful when the instructions and questions asked are simple and the purpose of the survey can be explained clearly in print.</p> <p>Each respondent receives an identical set of questions, phrased in exactly the same way.</p> <p>Errors resulting from the recording of responses by interviewers are reduced.</p> <p>The respondents are free to answer in their own time, at their own pace.</p> <p>Fear and embarrassment, which may result from direct contact, are avoided.</p> <p>In certain cases there can be no contact with the interviewers.</p> <p>When the questionnaire is designed for self-administration and mailed, it is possible to include a larger number of subjects.</p> <p>A questionnaire can guarantee confidentiality and may elicit truthful responses.</p> <p>The interviewer, whose personal appearance, mood or conduct may influence the results of an interview, is not present when the questionnaire is completed.</p> | <p>Difficulty of securing an adequate response.</p> <p>Sampling problems could be experienced such as a low return rate</p> <p>Complex instruments, ambiguity or vagueness will result in poor responses.</p> <p>The method is unsuitable when probing is desirable.</p> <p>Ambiguous, incomplete or inaccurate information cannot be followed up.</p> <p>There is no opportunity to obtain supplementary observational data.</p> <p>The respondent's motivation for answering the questionnaire is unknown.</p> <p>Self-administered questionnaires for very young, illiterate or some disabled people are difficult to complete.</p> <p>Possibility of misinterpretation of the questions by respondents.</p> |

Source: Burns, 2000

The advantages and disadvantages of questionnaires, as stated by Burns (2000), were considered when designing the questionnaire for this study.

Open-ended type questions supply a frame of reference for the respondents' answers, as well as imposing a minimum of restraint in the expression of their opinions. Other than being limited to the subject of the question, there are no restrictions on either the content or the manner of the respondents' replies (Burns, 2000).

Table 3.2 refers to this study from Appendix A to Appendix O. Appendix A consists of closed-ended questions and Appendix B to Appendix O consist of open-ended questions. The closed-ended items in this study allowed for five fixed alternatives: "strongly agree", "agree", "disagree", "strongly disagree" or "don't know".

Table 3.2: Question types and descriptions

| Type of question | Description |
|-----------------------------|---|
| Open-ended | Allows respondents to answer in their own words. |
| Closed-ended | Questions to which people respond in fixed categories of answers. |
| Paired-comparison questions | Questions that ask respondents to make judgements between alternatives taken two at a time. |
| Contingency questions | Questions asked only of some respondents, determined by their response to other questions. |
| Ranking questions | Closed-ended questions that ask respondents to rank order. |
| Inventory questions | Closed-ended questions that ask respondents to list all reactions that apply to them. |
| Matrix questions | Closed-ended questions that ask respondents to use the same categories to supply the information. |
| Multiple-choice questions | Closed-ended questions that ask respondents to select a category response from a range of possible responses. |

Source: Leedy, 1997

3.1.4 Using a Likert scale to measure and evaluate questionnaire responses

According to Hill (1995) the Likert scale is commonly found in many types of attitude-measuring research. This scale is easy to complete but does have a considerable disadvantage when bold statements are used to bias respondents' answers. Mouton (2001) states that the Likert scale is an attempt to improve the levels of measurement of social research through the use of standardised response categories, such as "strongly agree", "agree", "disagree" and "strongly disagree". The use of this scale in this study is demonstrated in Appendix A. An adapted Likert scale ranging from "strongly agree" to "strongly disagree" (from 1 to 4), was used for this study, assessing the response to each item in the questionnaire.

3.1.5 Design of the questionnaire

In designing this questionnaire, a literature review was used, as well as the criteria from selected standards and quality excellence models. One requirement was that the respondents, namely, the Directors and Heads of Departments, should be conversant with the areas covered, which are as follows:

- Criterion 1: Leadership with respect to vision, mission and values (Appendix A)
- Criterion 2: Clear strategic goals and performance indicators (Appendix A)
- Criterion 3: Resourcing and funding (Appendix A)
- Criterion 4: Policies and procedures (Appendix A)
- Criterion 5: Self-evaluation guidelines (Appendix A)
- Criterion 6: Counselling (Appendix B)
- Criterion 7: Student development (Appendix C)
- Criterion 8: Health and safety (Appendix D)
- Criterion 9: Student housing (Appendix E)
- Criterion 10: Financial aid (Appendix F)
- Criterion 11: Human resources (Appendix G)

- Criterion 12: Marketing (Appendix H)
- Criterion 13: Information and communication technology (Appendix I)
- Criterion 14: Finance (Appendix J)
- Criterion 15: Technical services (Appendix K)
- Criterion 16: Protection services (Appendix L)
- Criterion 17: Registrations (Appendix M)
- Criterion 18: Examinations (Appendix N)
- Criterion 19: Library (Appendix O)

It was found that the first 5 questions in the questionnaire are generic and are applicable to all the support units in the study, while the other 14 questions are specific to the various support units listed in chapter 1. Questionnaires were distributed to the 23 institutions, with each support unit in each of the institutions receiving 1 questionnaire. The number of questionnaires returned were between 4 (Finances) and 9 (Health and Safety). The Quality Assurance Unit was asked to answer only the generic questions to avoid bias towards a more specific set of questions for such units. Since the return rate per unit was generally low, the data were only analysed descriptively in terms of means and standard deviations. An attempt was made to obtain an overall mean and averaged standard deviation for the combined set of fourteen specific questions, and then to highlight unexpected high and low individual values.

The questionnaires consist of 15 sections in total. Five questions represent generic criteria (given in Appendix A) while 14 questionnaires represents specific questions to each department. All questionnaire items are closed-ended questions to facilitate quantitative analysis using Statistical Package for Social Sciences (SPSS). The responses will be measured by: “agree”, “strongly agree”, “disagree”, “strongly disagree” and “don’t know”. The questionnaires were designed to test the criteria and link them to the research objectives.

3.1.6 Types of sampling

There are different types of sampling techniques found in the literature. The two main categories are non-probability sampling and random sampling (Sarantakos, 1993; Leedy, 1997; Cohen, Manion and Morrison, 2005).

3.1.6.1 Non-probability sampling

Cohen *et al.* (2005) provide an overview of non-probability sampling and state that with non-probability sampling there is no way of forecasting, estimating or guaranteeing that each individual under investigation will be included in the represented sample. Examples of non-probability sampling include convenience sampling, quota sampling, purposive sampling, dimensional sampling and snowball sampling. These are explained in more detail below:

- **Convenience sampling**

Convenience sampling involves choosing the most easily available subjects to serve as respondents and continuing to select them in this way until the required sample size has been obtained. The researcher simply chooses the sample from the subjects he or she has easy access to.

- **Quota sampling**

Quota sampling has been described as the non-probability equivalent of stratified sampling. Quota sampling tries to represent significant characteristics or strata of the wider population; unlike stratified sampling it sets out to represent these in the proportions in which they can be found in the wider population. A quota sample seeks to give proportional weighting to selected factors as they are represented in the wider population.

- **Purposive sampling**

With purposive sampling, researchers handpick the cases to be included in the sample on the basis of the researchers' judgements of their typicality. In this way, they build a sample that satisfies their specific needs. The sample is thus chosen for a specific purpose, for example a group of principals and senior managers of secondary schools may be chosen for research studying the incidence of stress amongst senior school managers.

- **Dimensional sampling**

Dimensional sampling is a further refinement of quota sampling. It involves identifying various factors of interest in the population and obtaining at least one respondent for every combination of such factors.

- **Snowball sampling**

In snowball sampling, researchers identify a small number of subjects that have the characteristics that they are interested in. These people are then used as informants to identify others for inclusion and these, in turn, identify yet others.

3.1.6.2 Random sampling

Cohen *et al.* (2005) provide an overview of random sampling in which they state that a sample is drawn from a wider population in a way that seeks to be representative of such a population. Types of such sampling include simple random sampling, systematic sampling, stratified sampling, cluster sampling, stage sampling and multi-phase sampling, which are discussed in more detail below:

- **Simple random sampling**

In simple random sampling, each member of the population has an equal chance of being selected and the probability of a member of the population being selected is unaffected by the selection of other members of the population.

- **Systematic sampling**

This method is a modified form of simple random sampling. It involves listing samples from a population list in a systematic fashion. For example, if from a population of say 2000, a sample of 100 is required, then every twentieth person can be selected. The starting point of the selection is chosen at random. This is random sampling according to a system.

- **Stratified sampling**

Stratified sampling entails the consideration of certain factors on a basis which one can divide the population up into subpopulations (groups/strata). In these subpopulations, the measurement of interest may vary between the different sub-populations. This type of sampling generally entails a two-stage process: the first stage identifies the characteristics of the population that must appear in the sample, and then divides the population into

homogeneous and discrete groups, for example male and female. The second stage entails randomly sampling within these groups, the size of which is determined by the judgement of the researcher.

- **Cluster sampling**

Cluster sampling is typically used when the researcher cannot get a complete list of the members of the population he or she wishes to study, but can get a complete list of 'clusters' of the population. Cluster sampling is used when the population is large and widely dispersed. This type of sampling was used during this study to select a specific number of support units, that is, a cluster that is in reasonably close proximity is sampled.

- **Stage sampling**

Stage sampling is a complex form of cluster sampling. Using all the samples may not be necessary in all the selected clusters, so, instead of using all the individuals contained in the selected clusters, the researcher randomly selects individuals from each cluster. This technique is frequently used when a complete list of all members of the population does not exist.

During this study, non-probability quota sampling was used for the distribution of questionnaires, because it represented the strata of the wider population. Convenience sampling was used for the interviews, which were conducted at a location conveniently located near to where the research was conducted.

A further explanation of the sampling is given in section 3.1.7, which covers the sampling plan and design used for this study. A comprehensive sample of the Directors and Heads of Departments of the units were selected. If they were not available, the next available person in charge was asked to complete the questionnaire.

3.1.7 Sample selection for this study

The number and type of support units found in institutions of higher education appear to vary significantly, depending on the size and nature of the institution. Figure 3.2 shows the structure of support units for a typical South African university. As shown in the figure, the support units may be classified into institutional support, campus support, student support and academic support units. The units selected for this study are indicated in grey. The academic function is included in order to

highlight the fact that support units serve teaching and learning, community service and research functions, in addition to meeting the specific needs of staff and learners.

Non-probabilistic quota sampling was used because the data obtained from the pilot study gave an indication of the availability of Directors and Heads of Departments for completing the questionnaires. Convenience sampling was used for the interviews.

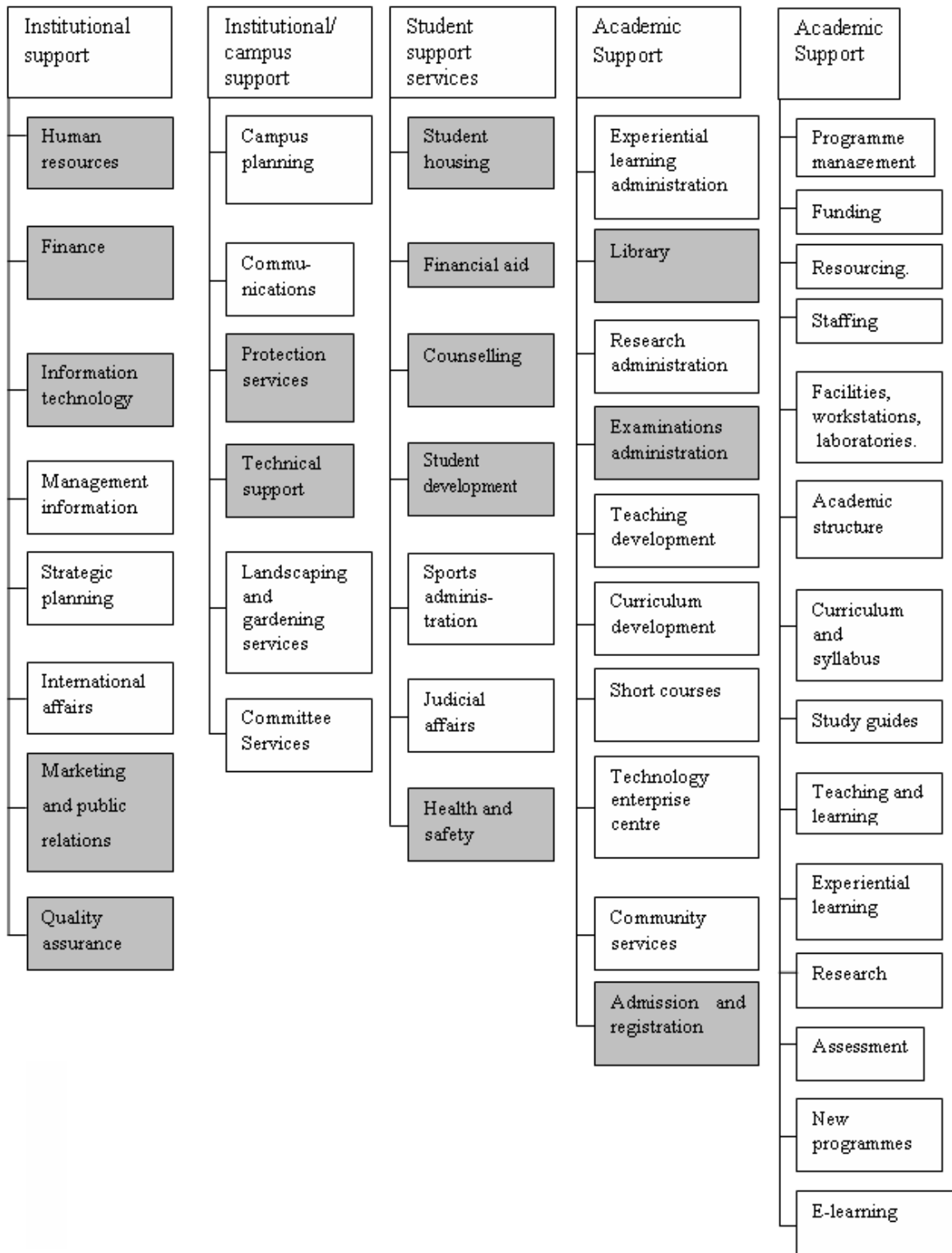


Figure 3.2: Structure of Support units for a typical South African University

The questionnaires amounted to 345 which represented 15 support units that were selected for each of the 23 public higher education institutions in this study. The questionnaires were sent via electronic mail, fax and post to the institutions as listed in Appendix T. In the final analysis, 199 questionnaires were completed in total as shown in table 3.3.

Table 3.3: Actual number of respondents after telephonic interventions

| | Quality Assurance | Student Counselling | Financial Aid | Student Housing | Student Development | Health and Safety | Human Resources | Marketing | Information and Communication Technology | Finance | Technical Services | Protection Services | Registrations | Examinations | Library | Total |
|-------|-------------------|---------------------|---------------|-----------------|---------------------|-------------------|-----------------|-----------|--|---------|--------------------|---------------------|---------------|--------------|---------|-------|
| UCT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | 1 | | 8 |
| CUT | | 1 | | 1 | | 1 | | 1 | 1 | | | 1 | 1 | 1 | | 8 |
| CPUT | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | 1 | 1 | 12 |
| DUT | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | | 1 | 1 | 1 | | 1 | 11 |
| UFH | | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | | 1 | 1 | 1 | 1 | 11 |
| UFS | | 1 | | 1 | 1 | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 11 |
| UJ | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | | 10 |
| UKZN | | 1 | 1 | 1 | 1 | | | | 1 | 1 | | 1 | 1 | 1 | | 9 |
| UL | | | | 1 | | | | | 1 | | | 1 | 1 | 1 | 1 | 6 |
| MT | | | | 1 | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 10 |
| NMMU | 1 | 1 | 1 | 1 | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| NWU | | | | 1 | 1 | | | | | | | | | | | 2 |
| UP | | | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 11 |
| UR | 1 | | 1 | | 1 | 1 | | | | | 1 | 1 | | 1 | 1 | 8 |
| US | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | | | 1 | 1 | | 1 | 10 |
| TUT | | | 1 | 1 | 1 | 1 | 1 | | 1 | | 1 | 1 | | | 1 | 9 |
| UNISA | 1 | 1 | | | | | | 1 | 1 | | | | | 1 | | 5 |
| VUT | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 13 |
| UV | | | | | 1 | | | | | | | | | 1 | | 2 |
| WSU | 1 | | 1 | 1 | | | | | | | | | | | | 3 |
| UWC | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | 1 | 1 | 13 |
| WITS | 1 | | 1 | 1 | | | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 10 |
| UZ | 1 | | | | 1 | | 1 | | | | | | | 1 | 1 | 5 |
| TOTAL | 10 | 13 | 14 | 19 | 17 | 13 | 12 | 9 | 14 | 4 | 11 | 17 | 13 | 18 | 15 | 199 |

3.1.8 Validity and reliability

The term “validity” refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under construction (Babbie and Mouton, 2004). If an instrument is assessed as having “validity” it means that the instrument and its elements are sound for their intended purpose. The validity of the test instrument is statistically measured by means of Factor Analysis, which attempts to identify the underlying variables, or factors, that explain the set or pattern of correlations within a set of observed variables. Factor Analysis is often used in data reduction to identify or confirm a small number of factors that explain most of the variance observed in a much larger number of variables. Principle Component Analysis is a method used to extract and rotate factors or groupings to produce a more meaningful underlying structure (Cohen *et al.*, 2005).

Reliability is essentially a synonym for consistency and replicability over time, instruments and groups of respondents. It means that the measurements are consistent and, if the experiment is repeated under similar conditions, the same measurements will be obtained (Melville and Goddard, 1996). The more accurate the research findings are, the more reliable the research process will be (Bouma, 2000). The Cronbach Alpha test is a statistical tool that can be used for assessing the reliability of data (Cohen *et al.*, 2005). A Cronbach Alpha value of 0.70 is an acceptable reliability coefficient (Nunally, 1978). The reliability of the respondents in this study was assessed using the Cronbach Alpha values which are stated in section 4.2.

3.1.9 Interviews

Melville and Goddard (1996) state that when the researcher has chosen to use the interview as an instrument, he or she must plan the questions prior to the actual interview. An interview is a one-on-one verbal interaction between the researcher and the interviewer. The aim is to get the views of the respondent. The researcher should not direct the answers by his tone of voice or by the way he or she phrases the question. According to Fellows (1997) there are three types of interviews namely:

- structured
- unstructured
- semi-structured.

These will be explained in the next section.

3.1.9.1 Structured interviews

A structured interview requires a researcher to prepare questions for the interview prior to conducting it. The structured interview is useful when the researcher is aware of what he or she does not know and therefore is in a position to frame questions that will supply the knowledge required. The interview is a neutral medium during which questions are asked.

3.1.9.2 Unstructured interviews

An unstructured interview allows the respondent a chance to express his or her feelings about the information collected by the interviewer and to comment on widely defined issues during the interview. The interviewer introduces the topic and records the respondent's responses. This type of interview allows the interviewee an opportunity to give his or her own ideas on the subject matter.

3.1.9.3 Semi-structured interviews

These are a combination of both the structured and the unstructured interview. This type of interview varies widely according to the type of questionnaire and area of research.

3.1.9.4 Advantages and disadvantages of interviews

When designing the interview, both the advantages and disadvantages of interviews, as stated by Burns (2000) in table 3.4, should be considered.

Table 3.4: Advantages and disadvantages of interviews

| Advantages of interviews | Disadvantages of interviews |
|---|---|
| <p>Interviews are more flexible to arrange.</p> <p>The response from interviews is greater than other tools such as questionnaires.</p> <p>A face-to-face interaction assists in the establishment of rapport and a higher level of motivation amongst respondents.</p> <p>A useful method when extensive data is required on a small number of topics.</p> <p>Probing may be used to elicit more complete responses.</p> <p>Observation of the respondent's non-verbal communication and environment is possible.</p> <p>Greater flexibility is afforded to the respondent.</p> <p>The interviewer is able to control the sequence of the items.</p> <p>This approach is useful in obtaining responses from people who would find a written response impossible.</p> <p>Individualised appreciation can be shown to the respondents.</p> | <p>Expensive and time consuming</p> <p>A limited number of respondents may be interviewed owing to time and financial considerations.</p> <p>The interviewer needs to have appropriate interpersonal skills.</p> <p>There will be an interaction between the interviewer and respondent.</p> <p>Respondents may feel that they are being "put on the spot".</p> <p>Flexibility afforded by unstructured interviews may generate difficulties when attempts are made to categorise and evaluate responses.</p> |

Source: Burns, 2000

Some of the support units in the Western Cape were chosen using convenience sampling. The Heads of Department and Directors of these units were interviewed according to the schedule of interviews in table 3.5. In this study, structured interviews were used to elicit further information on the criteria for support units and to investigate the key processes of the units. These interviews were conducted in the offices of the Directors and the Heads of Departments at their various institutions.

Table 3.5: Schedule of interviews

| | University of Cape Town | Cape Peninsula University of Technology | University of Stellenbosch | University of Western Cape |
|---------------------|-------------------------|---|----------------------------|----------------------------|
| Student counselling | √ | √ | √ | √ |
| Student development | √ | √ | X | √ |
| Student housing | √ | √ | √ | √ |
| Safety and health | √ | √ | √ | √ |
| Financial aid | √ | √ | √ | X |
| Quality | √ | X | √ | √ |

3.1.10 Preliminary work carried out during the pilot study

According to Oppenheim (1992) and Sproull (1988) a pilot study serves a variety of purposes, some of which are discussed below:

- to estimate the time it will take to complete a sample set of questions
- to provide the researcher with an opportunity to test the research instrument and its suitability
- to complete the study on a minor scale

- to give the researcher an opportunity to plan and practice asking the questions to see if the questions are correct and whether the respondents understand them.

The pilot study was done on 15 support units at the Cape Peninsula University of Technology (Bellville Campus). The questionnaire was accepted by most of the respondents except for the criterion on “leadership”, which included “responsiveness”: this was rejected by 7 out of 15 respondents. The conclusion was drawn that “responsiveness” had to be deleted from the questionnaire. The questionnaires were piloted in order to identify areas that should be refined or changed. The pilot study highlighted aspects such as the perception and interpretation of questions, the appropriate language to be used, the length of the questionnaire and the effectiveness of the questions used in the questionnaire. The findings of the pilot study revealed that some changes needed to be made to the questionnaire, as some participants needed clarity on some of the questions. The questionnaire on quality evaluation criteria for support systems is included in Appendix A after it was developed.

3.1.11 Data collection methods and fieldwork for the main study

The poor questionnaire return rate (less than 5% of those approached via electronic mail) led to personally administered telephonic questionnaires being held with 143 respondents. These comprised one-on-one interactions between the respondent and the researcher as supported by Frazer and Meredith (2000) and Melville and Goddard (1996). The institutions and the support units covered in the study are shown in Appendix T. Appointments were made with each of the respondents in advance. The questionnaire was electronically mailed to all respondents so that they could familiarise themselves with the questions. Respondents were then telephoned and the introduction to the questionnaire was read to them. Prior planning was done to ensure that the data were objectively analysed. Decisions had to be made regarding the most suitable time to contact the respondents, and the number and intervals for callbacks if contact could not be established. The data collection was done with the Head of Departments and Directors of support units at 23 higher institutions of the Republic of South Africa. The Head of Department and Directors that were selected for the study are included in Appendix V. The structure of the support units can be referred to in section 3.1.7 where the sample selection of this study was discussed.

3.2 MODELS OF SUPPORT SYSTEMS IN HIGHER EDUCATION

3.2.1 Overview of the Support Systems Model

The objectives of the study stated that a model would be designed that would include the criteria for evaluating support systems. The Coetzee Model was used as a basis for this owing to the fact that this model is already in use at the Cape Peninsula University of Technology for the purposes of academic evaluation.

The findings of the literature review and the pilot study showed that the criteria of the Coetzee Model were an acceptable foundation on which to work. However, some criteria needed to be added to the Coetzee Model to enhance the effectiveness of the Support Systems Model of the study.

Table 3.6, which is a comparison of all the models, shows that the Parasuraman Gap Model, ISO 9001:2000 and SAQA do not contain all the criteria that are included in the Support Systems Model. The criteria have been tested in a pilot study at the Cape Peninsula University of Technology using the questionnaires in Appendix A to Appendix O.

Using the information gathered during this research, a Support Systems Model was developed to facilitate evaluation for support units in institutions of higher education.

The Support Systems Model in figure 3.4 is based on a definition that determines quality as the degree of fit obtained between stated and delivered customer requirements. The difference between the customer requirements and customer satisfaction is influenced by “leadership”, “vision”, “mission”, “strategy”, “goals and performance indicators” (top inverted pyramid) and “management’s operational effectiveness”, “support units policies”, “procedures and evaluation” (bottom pyramid).

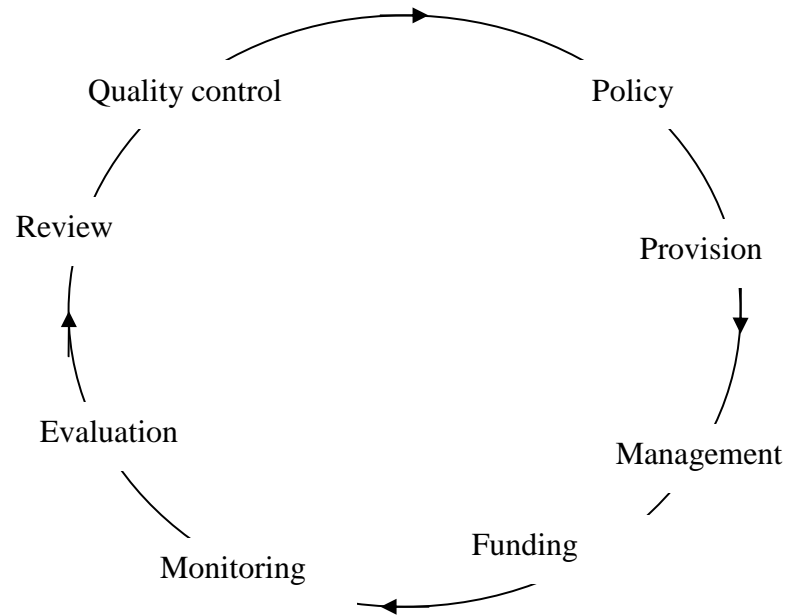


Figure 3.3: Closed loop system
Source: Ashworth and Harvey, 1994

The “closed loop system” represented in figure 3.3 is a chain of activities that starts with the stated customer needs; processing then occurs and it ends with the delivery of customer needs. This integrates the idea of the value chain (Porter, 1985) in a manner that relates to the customer needs that are delivered.

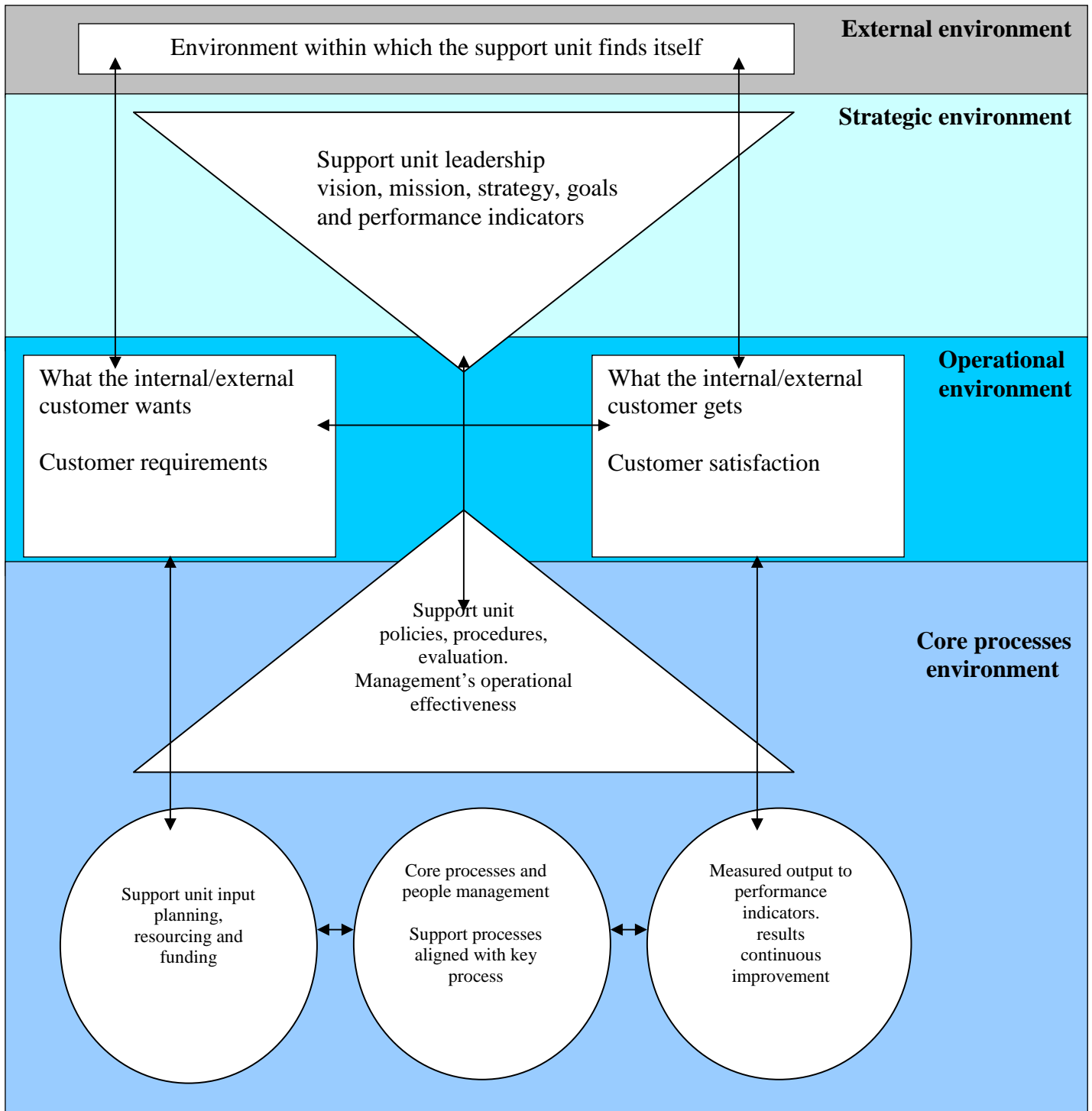


Figure 3.4: The Support Systems Model
 Source: Adapted from Coetzee, 1995

3.2.2 Criteria of the Support Systems Model of the main study

The criteria for the model were derived from local, national and international institutional support unit evaluations. They have been built up over the past three years within the University of Technology community and associated professional bodies. The following are recommended criteria, as described by Coetzee (1999):

- **Criterion 1: Leadership with respect to vision, mission and values**

The unit has developed and communicated its vision, mission and values. There is a clear understanding of the essence of the support unit, why it exists and where the senior leaders want to take it in the future. The unit has developed its vision, mission and values by, for example, getting people involved.

- **Criterion 2: Clear strategic goals and performance indicators**

The particular unit has clearly stated strategic goals and performance indicators.

- **Criterion 3: Resourcing and funding**

The specific unit is adequately resourced and funded in terms of budgets, management, infrastructure, staff, workstations and staff development.

- **Criterion 4: Policies and procedures**

Handbooks are in use that have been approved by and aligned with the institution, and these should include policies and procedures that are used when evaluating the unit. As part of the evaluation documentation, action plans should be drawn up to support the administrative staff of the unit in implementing policies and services.

- **Criterion 5: Self-evaluation**

The unit's self-evaluation determines the implementation and use of the unit's policies and procedures, the extent to which strategic goals are being met, and the overall success of the TQM drive in the unit. Top management must obtain direct feedback on the efficiency of the unit's quality management system. The unit should conduct stakeholder surveys to determine the quality of service provision and should keep records of such issues to provide evidence of an effective quality management system.

- **Criterion 6: Core processes and people management**

The core process include understanding what the customer wants, using suitably planned resources and funding to manage the support processes and people in line with the key processes, measuring the key results and ensuring that the customer is satisfied with the outcome of the process.

3.2.3 The relationship between the concept of quality and the Support Systems Model

The definition of quality that holds for this model is that the level of quality achieved within a support function is the degree of fit between stated and delivered customer requirements. This definition forms part of the domain of the institution and, as such, influences the input, the core process, the support processes and the output of the institution.

The criteria of each of the following models, namely BNQP, ISO 9001:2000, EFQM, Gap Model, SAEM, SAQA and HEQC, will now be compared with those of the Support Systems Model in an attempt to choose the most appropriate support quality criteria for this study.

Hofstee (2006) states that it is important to point out the strengths and weaknesses of the literature used. A SWOT analysis was therefore carried out on the Coetzee Model (Coetzee, 1995) and the results are recorded in table 3.6. A SWOT analysis is a popular strategic planning tool. The weaknesses are turned into strengths, whilst taking cognisance of the threats. The opportunities identified in the SWOT analysis could be used as continuous improvement areas.

Table 3.6: SWOT analysis of the Coetzee Model

| STRENGTHS | WEAKNESSES |
|--|--|
| <p>Leadership and Management are shown as separate issues. Governance issues such as policies and procedures included in the model have been implemented.</p> <p>The model is approved by Cape Peninsula University of Technology (CPUT) as the institutional Support Quality Model.</p> | <p>Support processes are not well defined.</p> <p>In the model there is no explicit link to core processes such as Teaching and Learning, Research and Community Service.</p> <p>Measurement, Analysis and Knowledge Management are not explained in depth</p> <p>There is no criteria for partnership</p> |
| OPPORTUNITIES | THREATS |
| <p>Service quality is not included in the model.</p> <p>Leadership and Strategic Planning could be separated to align with BNQP, EFQM and SAEM.</p> <p>Criteria are not as detailed as in the BNQP and EFQM.</p> | <p>The model was not originally developed for education, in comparison to the EFQM and BNQP, which were developed specifically for education.</p> <p>The model is not recognised internationally.</p> |

Source: Inference reached by the researcher

3.2.4 Baldrige Education Criteria for Performance Excellence Framework comparison

A comparison of the criteria of the Baldrige National Quality Program Education Criteria for Performance Excellence (US NIST, 2004) and those of the Support Systems Model reveals the following:

- **Organisational profile**

There is no relationship between the BNQP and the Support Systems Model.

- **Leadership**

There is a relationship between the “leadership” aspect and strategic environment of the Support Systems Model.

- **Strategic planning**

There is a relationship between “strategy” and the strategic environment in the Support Systems Model.

- **Student, stakeholder and market focus**

There is a relationship between “what the customer wants” and the operational environment of the Support Systems Model.

- **Measurement, analysis and knowledge management**

There is a relationship between “measured output to performance indicators” in the core process of the Support Systems Model.

- **Faculty and staff focus**

There is a relationship between “resourcing” and “performance indicators” and the core process domain of the Support Systems Model.

- **Process management**

There is a relationship between “support processes” that are aligned to key processes in the core process of the Support Systems Model.

- **Organisational performance results**

This criterion examines the institution’s performance and improvement in key result areas. There is a relationship between “measured output” and “customer satisfaction” in the core process and operational environment of the Support Systems Model.

3.2.5 ISO 9001:2000 principles and criteria comparison

A comparison of the criteria of ISO 9001:2000 (ISO, 2000b) and those of the Support Systems Model reveals the following:

3.2.5.1 Principles of ISO 9001:2000

- **Leadership**

There is a relationship between “leadership” in ISO 9001:2000 and “leadership” in the Support Systems Model.

- **Customer focus**

There is a relationship between “customer focus” and “what the customer wants/customer requirements” in the Support Systems Model.

- **Process focus**

There is a relationship between “process focus” and “support processes aligned with key processes” in the core process of the Support Systems Model.

- **System focus**

There is a relationship between “systems focus” and the “support processes aligned with key processes” in the core process of the Support Systems Model.

- **Involvement of people**

There is a relationship between “involvement of people” and “resourcing” and the “measured output to performance indicators” element of the Support Systems Model.

- **Fact-based decision making**

There is a relationship between “fact-based decision making” and “measured output to performance indicators” in the Support Systems Model.

- **Supplier relationships**

There is a relationship between “supplier relationships” and “resourcing” in the Support Systems Model.

- **Continuous improvement**

There is a relationship “continuous improvement” from ISO 9001:2002 and “continuous improvement” in the Support Systems Model.

3.2.5.2 Criteria of ISO 9001:2000

- **Quality management system (clause #4)**

“Quality management system” has a relationship with “policies and procedures” of the Support Systems Model.

- **Management responsibility (clause #5)**

“Management responsibility” has a relationship with “leadership” and “management’s operational effectiveness” of the Support Systems Model.

- **Resource management (clause #6)**

“Resource management” has a relationship with “input, resourcing and funding” in the Support Systems Model.

- **Product realisation (clause #7)**

Product realisation has a relationship with “support process aligned with key process” and “management operational effectiveness” in the Support Systems Model.

- **Measurement, analysis and improvement (clause #8)**

“Measurement, analysis and improvement” has a relationship with the “policies, procedures and evaluation” in the Support Systems Model.

3.2.6 European Foundation Quality Model (EFQM) criteria comparison

A comparison of the criteria of European Foundation Quality model (HBO Expert Group, 1999) and those of the Support Systems Model reveal the following:

- **Leadership**

There is a relationship between “leadership” and the “leadership” element in the Support Systems Model.

- **Policy and strategy**

There is a relationship between “policy and strategy” and “strategy in the strategic environment” and “policies and procedures” in the core processes of the Support Systems Model.

- **People management**

There is a relationship between “people management” and the Support Systems Model in terms of “input resourcing” in the core processes.

- **Partnerships and resources**

There is a relationship between “partnership and resources” and the Support Systems Model in terms of “resourcing” criterion.

- **Management of processes**

There is a relationship between “management of processes” and the Support Systems Model in terms of “support process” and with “key process”.

- **Customer satisfaction**

There is a relationship between “customer satisfaction” and the Support Systems Model in terms of “customer satisfaction”.

- **People satisfaction**

There is a relationship between “people satisfaction” and “internal/external customer satisfaction” in the Support Systems Model.

- **Impact on society**

There is a relationship between “impact on society” and the “environment” within which the support unit finds itself in the Support Systems Model.

- **The business results criterion**

There is a relationship between “business results criteria” and the “measured output to performance indicators” in the Support Systems Model.

3.2.7 The Parasuraman Gap Model and associated variants

A comparison of the criteria of the Gap Model as per Parasuraman *et al.* (1985) and those of the Support Systems model reveal the following:

Gap 1: The gap between customer expectations and management perception of these expectations

This gap is related to the gap in the Support Systems Model, that is, between the strategic environment (support unit leadership) and the operational environment (what the customer wants). All such environments can be influenced by competitor activities.

Gap 2: The gap between management perception of customer expectations and the ability to translate these into service quality standards

This gap is related to the gap in the Support Systems Model between the strategic environment (support unit leadership) and the operational environment (support processes aligned with key process).

Gap 3: The gap between service quality specifications and the actual service delivery

This gap is related to the gap in the Support Systems Model between the core process (support processes aligned with key process) and “what the customer gets” in the operational environment.

Gap 4: The gap between service delivery and external communications

This gap is related to the gap in the Support Systems Model between the operational environment (what the customer wants) and the external environment within which the support unit finds itself.

Gap 5: The gap between the quality customers perceives in a service and their expectations

This gap is related to the gap in the Support Systems Model between what the customer wants and what the customer gets in the operational environment.

3.2.8 The South African Excellence Model criteria comparison

A comparison of the criteria of the South African Excellence Model (SAEF, 1997) and those of the Support Systems Model reveal the following:

- **Leadership**

There is a relationship between “leadership” in the SAEM and the “leadership” aspect of the Support Systems Model.

- **Policy and strategy**

There is a relationship between “policy and strategy” and the “policies and procedures” criterion of the Support Systems Model. Areas to address include how the organisation reviews performance requirements, key performance measures and/or indicators or benchmarks.

- **Customer and market focus**

There is a relationship between “customer and market focus” and the “operational environment” criterion of the Support Systems Model.

- **People management**

The “resourcing” and “performance indicators” of the Support Systems Model is related to “people management”.

- **Resources and information management**

There is a relationship between “resources and information management” and the “resourcing and funding” criterion in the Support Systems Model.

- **Processes**

There is a relationship between “processes” and the “processes aligned with key process” in the Support Systems Model.

- **Impact on society**

The “measured output to performance indicators” and “customer satisfaction” of the Support Systems Model are related to “impact on society”.

- **Customer satisfaction**

The “customer satisfaction” criterion of the Support Systems Model is related to “customer satisfaction”.

- **People satisfaction**

The “customer satisfaction” criterion of the Support Systems model is related to “people satisfaction”.

- **Supplier and partnership performance**

The “resourcing” criterion in the Support Systems Model is related to “supplier and partnership performance”.

- **Business results**

The “performance indicators” and “customer satisfaction” criteria in the Support Systems Model are related to “business results”.

3.2.9 The South African Qualifications Authority criteria comparison

A comparison of the SAQA (2001) criteria and those of the Support Systems Model reveal the following:

- **Policy statement**

This is related to “strategy and policies” in the Support Systems Model.

- **Quality management systems**

This is related to “policies and procedures” in the Support Systems Model.

- **Review mechanisms**

This is related to the “evaluation” criterion in the Support Systems Model.

- **Programme delivery**

This is related to the “processes” criterion in the Support Systems Model.

- **Staff policies**

This is related to the “resourcing” and “policies and procedures” criteria in the Support Systems Model.

- **Learner policies**

This is related to the “policies and procedures” criterion in the Support Systems Model.

- **Assessment policies**

This is related to the “policies and procedures” criterion in the Support Systems Model.

- **Management system and policies**

This is related to the “policies and procedures” in the Support Systems Model.

3.2.10 The Higher Education Quality Committee (HEQC) criteria comparison

A comparison of the HEQC’s audit criteria (CHE, 2004b) and the Support Systems Model reveal the following:

- **Planning**

This is related to “planning” as part of the core processes in the Support Systems Model.

- **Resource allocation**

This is referred to as “resourcing and funding” as part of the core processes in the Support Systems Model.

- **Quality management system**

This is related to “policies and procedures” as part of the core processes in the Support Systems Model.

- **Use of benchmarking, user surveys and impact studies**

This is related to “customer requirements” and “customer satisfaction” in the domain in the Support Systems Model.

- **Academic planning**

This is related to the “planning” criterion in the Support Systems Model.

- **Quality management mechanisms**

This is related to the “policies and procedures” criterion in the Support Systems Model.

- **Quality improvement plan**

This is related to the “planning” criterion in the Support Systems Model.

- **Staff development policies**

This is related to the “resourcing” criterion of the Support Systems Model.

- **Student access**

This is related to the “policies and procedures” criterion in the Support Systems Model.

- **Student management information system**

This is related to the “support processes” criterion in the Support Systems Model, which is aligned with the key processes.

- **Efficient structures and procedures**

This is related to the “policies and procedures” criterion in the Support Systems Model.

- **Staffing**

This is related to the “resourcing and funding” criterion in the Support Systems Model.

- **Resourcing**

This is related to the “resourcing and funding” criterion in the Support Systems Model.

- **Certification**

This is related to “support processes” in the Support Systems Model, which is aligned with the key processes.

3.2.11 Support Systems Model comparison with other models

Table 3.7 shows a comparison between the Support Systems Model and other models discussed in this chapter. The conclusion is that the Support Systems Model conforms in principle to the criteria requirements of the Malcolm Baldrige Quality Model, the South African Excellence Model, the European Foundation for Quality Model and the HEQC criteria. Based on all the available data on criteria identified in the research instruments, it was decided to use the Support Systems Model as a basis for further research in this study.

Table 3.7: Support Systems Model comparison with other models

| Criteria | Support Systems Model | Baldrige National Quality Program | ISO 9001: 2000 | Excellence Foundation for Quality Management | Parasuraman Gap Model | South African Excellence Model | Higher Education Quality Committee | South African Qualifications Authority |
|--|------------------------------|--|-----------------------|---|------------------------------|---------------------------------------|---|---|
| Environment (impact on society) | √ | √ | | √ | √ | √ | √ | |
| Support unit leadership, vision, mission, strategy – strategic environment | √ | √ | √ | √ | | √ | √ | √ |
| Customer requirements – operational environment | √ | √ | √ | √ | √ | √ | √ | |
| Customer satisfaction – People satisfaction domain | √ | √ | √ | √ | √ | √ | √ | |
| Support unit policies, procedures and evaluation – core process and people management. | √ | √ | √ | √ | | √ | √ | √ |
| Support unit input, planning, resourcing and funding – core process | √ | √ | √ | √ | | √ | √ | √ |
| Support processes aligned with key process – core process | √ | √ | √ | √ | √ | √ | √ | √ |
| Measured output to performance indicators – core process results | √ | √ | √ | √ | √ | √ | √ | √ |

3.3 CHAPTER SUMMARY

The methods used to gather the data from respondents were discussed, as well as the design and development of the criteria, the questionnaire, the sampling design and the interviews. A research plan was presented to show the overall work undertaken in this study.

In order to explore evaluation criteria for selected administration and support systems in South African higher education institutions, the criteria of the Support Systems Model were compared to other quality models, namely the South African Excellence Model, the European Foundation Quality Model, the Malcolm Baldrige Quality Model, the HEQC criteria, SAQA, the Gap Model and the ISO 9001:2000 Model. The criteria for the Support Systems Model align with some of the other models mentioned. The Support Systems Model is a model that was developed on the basis of the Coetzee Model which acted as a foundation.

The criteria and statements to be used in the questionnaire were established for the purposes of this research and are presented in Appendix A. The proposed criteria were taken from international and national models. The first five criteria were generic criteria and were applicable to all the support units selected. These were the following:

- Criterion 1: Leadership with respect to vision, mission and values
- Criterion 2: Clear strategic goals and performance indicators
- Criterion 3: Resourcing and funding
- Criterion 4: Policies and procedures
- Criterion 5: Self-evaluation.

Criteria 6 to 19 were developed for each of the units surveyed and covered the key process activities of such units. This study applied qualitative and quantitative methods of research.

Chapter 4 presents and analyses the results obtained from this study. The Statistical Package for Social Sciences (SPSS) package was used to analyse the results.

CHAPTER 4: DATA ANALYSIS

This chapter discusses the interviews that were conducted, Factor Analysis carried out on the generic criteria data and the results of the analysis. Sample selection for the main study will also be discussed.

4.1 SELECTED INTERVIEWS

The main purpose of the interviews was for Directors and Heads of Departments to review the existing criteria, in order to allow them to propose new criteria and to respond to proposed criteria.

4.1.1 Interviews with the Directors and Heads of Department: Student Counselling

The Director of Student Counselling at the University Stellenbosch (SU) mentioned that there were different areas of student development, namely student leadership, study methods, preparing for tests and exams, getting the most out of lectures, exam stress, interpersonal relations, social skills, self-confidence, time management, CV writing, interview skills and career management in their institution. The Directors of SU and the University of the Western Cape (UWC) disagreed with the criterion that calls for assessment as part of the admission process and stated that this should be left to the individual faculties.

It was revealed that the Director of Student Counselling at the University of Cape Town (UCT) disagreed with the criterion that states that learners should be “trained for job-hunting and employment”. The Directors of UCT and UWC disagreed with the criterion to “support alumni during career transitions” as they felt it was unrealistic because their units have limited resources. In addition, academic staff do not have the capacity to counsel as no training is given in lay counselling. The criterion “adequate resourcing and funding” was strongly supported. They were of the opinion that when staff are developed they accumulate points for Continuing Professional Development (CPD).

It is evident that four out of the five Directors of the institutions researched identified key processes for Student Counselling to assist and support them with their “transition to university life” and also to provide them with cost-effective counselling and psychological services. There is active participation in the criterion “student induction and welcoming programmes”. The Counselling Department contributes to planning, policy and participation in university committees and work groups. Counselling assists learners to cope with stress, manage their lives, assist with conflict resolution and deal with problems. It would seem that the Student Counselling units co-ordinate with the Health Service regarding psychiatric interventions.

All of the additional items mentioned relate to the following models and criteria: The Support Systems Model (support process aligned with key processes), the BNQP (process management), ISO 9001:2000 (Clause 4 Processes needed by QMS to be reviewed), and the SAEM (impact on society and processes).

4.1.2 Interviews with the Directors and Heads of Department: Student Development

It was found that the Director of Student Development at UCT strongly agreed with all the criteria. It is evident from the interviews that the Head of Student Development at UWC defines student development as that which optimises the learning environment and the quality of life of learners through a holistic approach. The Student Development support unit does not offer the criteria of a “writing centre” and “driver education” as compared with CPUT. These criteria form part of the key processes of student development.

The Head of Department at the CPUT agreed with all the criteria for student development. It was revealed that for the criterion “policies and procedures” that manuals can be replaced with handbooks and/or printed hard copies of policies, procedures and forms that include instructions. The word “handbook” was often confused with words such as files and manuals.

The responses revealed that the key processes identified were “orientation” to provide new learners with policies, procedures and programmes to enable them to make informed choices, informing learners of available services and programmes, assisting new learners to become familiar with campus environments, identifying appropriate “referral resources” and providing learners with personal health and safety information.

A comparison between the Support unit and the specific criteria of the unit coincides with the criteria “support process aligned with key processes” from the Support Systems Model, “processes” from the SAEM, “processes” from the EFQM and process management from BNQP.

4.1.3 Interviews with the Directors and Heads of Department: Student Housing

It was found during an interview with the Head of Department of Student Housing at SU that he indicated that he agreed with the criteria of “clear strategic goals and performance indicators” and mentioned that it is his function (in Student Housing) to integrate student accommodation goals with those of the academic programme of the institution. Emphasis is placed on the Servqual criteria for quality assurance. The Head of Department also strongly agreed with the criteria of “providing staff development and training support”, which falls under “resourcing and funding”.

The results of the respondents revealed that the Head of Department of Student Housing at UCT agreed with all the criteria. The “vision and mission” criterion was strongly agreed with in that the Head of Department agreed there should be good, efficient “leadership” and management of the unit. Adequate “resourcing and funding” was strongly agreed with. It was brought to the interviewee’s attention that information systems, technology infrastructure and assistance should be provided for staff and learners.

A suggestion for an additional criterion by the Director of UCT on “student housing” was for learners to get involved in “governance and leadership opportunities” with various activities and organisations. The “recreation and development” criterion was agreed to by the Director at UCT but it was additionally felt that they should co-operate with the fitness and health centres on campus.

The Head of Department of Student Housing at UWC agreed with all the criteria under “student housing”. The “catering services” are outsourced to allow Student Housing to focus on its core services and prices are negotiated annually. Student Housing assists with student governing boards that plan programming in the residence halls and the HOD advises student organisations and governments.

The Head of Department of Student Housing at the CPUT stated that opportunities are created for learners to get involved in “governance and leadership” in institutional organisations and residence life. He expressed the opinion that a criterion that could be added would be to plan and implement “quiet periods for study purposes”. It is evident from the interview with the Head of Department of Student Housing at CPUT that the key processes identified are “co-ordination of residence halls” activities and implementation of “quiet study periods”.

A comparison of the Support unit and the specific criteria under the unit coincide with the criteria “support process aligned with key processes” from the Support Systems Model, “processes” from the SAEM, “processes” from the EFQM and “process management from BNQP.

4.1.4 Interviews with the Directors and Heads of Department: Health, Safety and Risk Services

The Head of Department of Health and Safety at US agreed strongly with the criteria for “health and safety” and he suggested that a criterion, to have “regular fire drills” be added. He stated that some staff had been sent on an advanced fire drill course and that the fire extinguishers should be serviced regularly.

The Head of Department at UCT’s Risk Management Services Department strongly agreed with all the criteria for health and safety.

The Officer for the Department Health and Safety at UWC strongly agreed with all the criteria on health and safety. He added that “orientation” be done with learners on laboratory safety, fumes, ventilation extraction and general safety.

The Officer for Health and Safety at CPUT strongly agreed with all the criteria for health and safety, and would like to see the unit moving towards an integrated system of ISO 9001:2000, ISO 14000:2004 and OHSAS 18001:2007.

4.1.5 Interviews with the Directors and Heads of Department: Financial Aid

The Head of Department of Undergraduate Bursaries and Loans to which Financial Aid reports to at US strongly agreed with the “Leadership, vision, mission and values”.

The Head of Department of Financial Aid at UCT disagreed with the criterion of “inviting applications” on the basis that learners are given an initial screening to see if they are eligible before allowing them to register. The criterion for the “potential to succeed” was disagreed on, because it was mentioned that the National Student Financial Aid Systems (NSFAS) should not have the ability to grant funding to only those learners who will succeed, since there could be mitigating circumstances.

The Head of Department of Financial Aid at CPUT (Cape Town Campus) strongly agreed with all the criteria for financial aid except for the following two criteria: “Was the validity of the identity document numbers checked?” and “Is a copy of the identity document made and kept on file at the financial aid office and at NSFAS?”, to which he responded that he did not know.

The Head of Department of Financial Aid at CPUT stated that the key processes identified were of assistance to learners and families being provided, completion of various financial aid forms and applications for and allocation of financial aid funds. The unit provides a support service for learners by giving them employment on campus to assist them with paying off their loans. The unit may be contacted when student assistants are recruited. The purpose is to assist learners in paying their university fees and to alleviate any financial problems. The unit also makes the learners aware that there is a gap between the cost of attending a university and the funds available from other resources and savings.

A comparison of the Support Unit and the specific criteria in the unit shows that the criteria “Leadership” from the Support Systems Model coincides with “the purpose of the unit” from SAQA, and “organisational profile” from the BNQP.

4.1.6 Interviews with the Directors and Heads of Departments: Quality

The Head of Department of Quality at US mentioned that units intend to develop their own criteria and refer them to the Deputy Vice Chancellor (DVC) or a member of the management team. These criteria will be submitted to the Quality Assurance Committee and then to the DVC: Academic.

The Quality Manager at UCT stated that the university has introduced a document review system and may pilot a review of certain support services. The framework presented was an area from which they could learn. There was agreement on the main criteria 1 to 5 and the Quality Manager mentioned that there should be a set of minimum standards for support units. He was uncertain as to whether the key processes for the units could be implemented as part of an evaluation at UCT. The financial aid criteria were very detailed.

The Quality Manager at UWC requested clarity on the “purpose statement” and indicated that this would inevitably lead to the development of “goals”.

4.2 FACTOR ANALYSIS OF THE GENERIC CRITERIA DATA

Data were collected and formatted for analysis using a computerised statistics package, Statistical Package for Social Sciences (SPSS). The process was then run to conduct a Factor Analysis. Table 4.1 shows the pattern matrix of an oblique rotation, using Principle Component Analysis as the extraction method for the data of the criteria as listed in Appendix A.

Variance is a measure of variability of the production process. Variance is examined to determine whether a variation that is discovered is due to chance or to a problem in one of the processes.

Cronbach Alpha is a coefficient that is used to rate the reliability of an instrument (Cohen *et al.*, 2005)

Table 4.1: The pattern matrix for the original Factor Analysis data for the generic criteria

| Criteria | Component | | | | |
|--|-----------|-------|--------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 1.1 The unit has developed its vision, mission and values | -0.072 | .734 | -0.042 | .101 | -.151 |
| 1.2 There is clear understanding of the essence of the support unit | .063 | .826 | .081 | .000 | -.020 |
| 1.3 The unit should state how it developed its vision, mission and values | -.027 | .893 | -.085 | .034 | .000 |
| 1.4 The purpose statement will determine the unit's aims and objectives | .119 | .858 | -.020 | .030 | .062 |
| 1.5 The purpose must be clearly stated in response to the local, national and international context | .034 | .895 | .111 | -.085 | .090 |
| 1.6 There should be involvement of all internal and external stakeholders in the process | -.007 | .814 | .009 | -.033 | -.108 |
| 2.1 There are strategic goals and performance indicators | .672 | .035 | -.080 | -.057 | -.206 |
| 2.2 There should be progress towards the goals | .819 | .006 | -.072 | .034 | -.098 |
| 2.3 Goals and performance indicators should be regularly reviewed | .855 | .008 | .144 | -.034 | .017 |
| 2.4 The strategic plan should have clear timeframes and resources for the achievement of goals | .918 | -.024 | .023 | -.134 | .003 |
| 2.5 Regular review of the nature and extent of the unit's responsiveness is used to give effect to institutional goals and priorities | .871 | -.007 | .093 | -.053 | -.023 |
| 2.6 The unit should contribute towards institutional goals | .942 | -.031 | -.076 | .033 | -.068 |
| 2.7 Reliability is important: the service is performed right the first time | .839 | .076 | .055 | .066 | .104 |
| 2.8 The unit's assurance: knowledge and courtesy of employees help them to inspire and trust confidence | .811 | .071 | -.001 | .171 | .055 |
| 2.9 Empathy: Employers give customers caring, individualised attention | .717 | .101 | .038 | .182 | .097 |
| 3.1 The unit is adequately resourced and funded in terms of budgets, management, infrastructure, staff, workstations and staff development | .025 | -.018 | .448 | -.247 | -.387 |

| Criteria | Component | | | | |
|--|-----------|-------|-------|------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 3.2 There are adequate links between planning, resource allocation and quality management | .020 | .071 | .818 | .022 | -.024 |
| 3.3 The organisation maintains a work environment that contributes towards satisfaction and motivation of all staff | .040 | .088 | .909 | .039 | .089 |
| 3.4 Resources should be provided specifically for the service | -.035 | .024 | .772 | .118 | -.098 |
| 3.5 Tangibles: The equipment must be up to date and the physical facilities must be visually appealing | .182 | -.104 | .651 | .265 | -.003 |
| 4.1 Policies and procedures should be approved | .043 | .065 | .132 | .827 | -.046 |
| 4.2 The unit's policy must be turned into plans and actions | .062 | -.010 | .090 | .866 | -.079 |
| 4.3 The administrative staff shall be supported by adequate policies and services | .008 | .078 | .032 | .859 | -.154 |
| 5.1 Self-evaluation determines: The implementation of policies and procedures. The extent to which strategic goals are met. Quality improvement needs from staff, student, employer and stakeholder surveys. The quality to which stakeholder enquiries are handled. The record –keeping. The success of the Total Quality Management drive within the function | .049 | .046 | -.023 | .115 | -.836 |
| 5.2 Top Management should obtain feedback directly | .061 | .086 | .060 | .069 | -.796 |
| 5.3 There should be stakeholder surveys on quality provision | .015 | .084 | .043 | .042 | -.856 |

There appears to be strong negative factor loadings on criterion 5. It was decided to test true negativity by further Scale Purification. At this point, item 3.1 was removed from the scale since its loading was the smallest positive loading. The result of the repeat Factor Analysis is given in table 4.2.

Table 4.2: The pattern matrix for the Factor Analysis after removal of item 3.1

| | Component | | | | |
|---|-----------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 1.1 The unit has developed its vision, mission and values | -.048 | .699 | -.109 | -.124 | -.172 |
| 1.2 There is clear understanding of the essence of the support unit | .061 | .832 | .115 | -.006 | .011 |
| 1.3 The unit should state how it developed its vision, mission and values | -.016 | .859 | -.119 | -.017 | -.085 |
| 1.4 The purpose statement will determine the unit's aims and objectives | .121 | .855 | .029 | .054 | -.004 |
| 1.5 The purpose must be clearly stated in response to the local, national and international context | .025 | .897 | .167 | .057 | .122 |
| 1.6 There should be involvement of all internal and external stakeholders in the process | -.001 | .752 | -.066 | -.161 | -.018 |
| 2.1 There are strategic goals and performance indicators | .682 | -.006 | -.206 | -.195 | -.055 |
| 2.2 There should be progress towards the goals | .780 | -.018 | -.103 | -.149 | -.058 |
| 2.3 Goals and performance indicators should be regularly reviewed | .852 | .016 | .143 | .008 | .027 |
| 2.4 The strategic plan should have clear timeframes and resources for the achievement of goals | .912 | -.003 | .055 | .005 | .145 |
| 2.5 Regular review of the nature and extent of the unit's responsiveness is used to give effect to institutional goals and priorities | .865 | .013 | .121 | -.021 | .069 |
| 2.6 The unit should contribute towards institutional goals | .927 | -.014 | -.036 | -.049 | -.019 |
| 2.7 Reliability is important: the service is performed right the first time | .824 | .093 | .098 | .105 | -.046 |
| 2.8 The unit's assurance: knowledge and courtesy of employees help them to inspire and trust confidence | .797 | .087 | .034 | .079 | -.162 |
| 2.9 Empathy: Employers give customers caring, individualised attention | .683 | .107 | .067 | .081 | -.172 |
| 3.2 There are adequate links between planning, resource allocation and quality management | .035 | .085 | .796 | -.075 | .012 |

| | Component | | | | |
|--|-----------|-------|------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 3.3 The organisation maintains a work environment that contributes towards satisfaction and motivation of all staff | .045 | .070 | .878 | -.017 | -.016 |
| 3.4 Resources should be provided specifically for the service | -.035 | -.019 | .709 | -.221 | -.114 |
| 3.5 Tangibles: The equipment must be up to date and the physical facilities must be visually appealing | .158 | -.110 | .662 | -.061 | -.228 |
| 4.1 Policies and procedures should be approved | .045 | .048 | .044 | .025 | -.888 |
| 4.2 The unit's policy must be turned into plans and actions | .035 | -.004 | .104 | .026 | -.890 |
| 4.3 The administrative staff shall be supported by adequate policies and services | -.014 | .055 | .010 | -.092 | -.891 |
| 5.1 Self-evaluation determines: The implementation of policies and procedures. The extent to which strategic goals are met. Quality improvement needs from staff, student, employer and stakeholder surveys. The quality to which stakeholder enquiries are handled. The record –keeping. The success of the Total Quality Management drive within the function | .036 | .033 | .009 | -.853 | -.031 |
| 5.2 Top Management should obtain feedback directly | .033 | .046 | .068 | -.838 | -.026 |
| 5.3 There should be stakeholder surveys on quality provision | -.011 | .058 | .105 | -.902 | .053 |

Matrix tables are a convenient way of presenting the data for several variables. The tables help to determine whether the subcriteria are related to the main criteria. Subcriteria 2.2 to 2.9 (see Appendix A) are strongly correlated to 2.1 and measure in the same cluster as is evident from table 4.2.

It would appear that the removal of item 3.1 strengthened the negative factor loadings on criterion 5, and in addition created negative loadings for criterion 4. A further Scale Purification was attempted to justify both the negative loadings; this was done by removing item 3.5 (smallest positive scale loading) from the Factor Analysis as well and is evident from table 4.3. The result previously revealed that item 3.1 which states that the support unit criterion - “the unit is adequately resourced and funded in terms of budgets, management, infrastructure, staff, workstations and staff

development” that staff generally disagreed with this criterion even though it is not a direct responsibility of the support unit. The item 3.5 which is the criterion “tangibles: the equipment must be up-to-date and the physical facilities must be visually appealing” should be further investigated. There are no criteria showing potential difficulties or contradictions.

The relevance of this is that there is a possibility that criterion 3.1 be removed from the list. Since there is no correlation between the items 3.1 and 3.2; this means that item 3.1 indicates that there are potential difficulties or contradictions.

Table 4.3: The pattern matrix for the Factor Analysis after the additional removal of item 3.1

| | Component | | | | |
|---|-------------|-------------|-------|-------|-------------|
| | 1 | 2 | 3 | 4 | 5 |
| 1.1 The unit has developed its vision, mission and values | -.048 | .703 | .120 | .163 | -.127 |
| 1.2 There is clear understanding of the essence of the support unit | .058 | .831 | .003 | -.003 | .134 |
| 1.3 The unit should state how it developed its vision, mission and values | -.016 | .867 | .006 | .071 | -.148 |
| 1.4 The purpose statement will determine the unit's aims and objectives | .117 | .858 | -.059 | .006 | .041 |
| 1.5 The purpose must be clearly stated in response to the local, national and international context | .023 | .899 | -.052 | -.116 | .175 |
| 1.6 There should be involvement of all internal and external stakeholders in the process | -.012 | .754 | .164 | .010 | -.061 |
| 2.2 There should be progress towards the goals | .773 | -.014 | .136 | .062 | -.118 |
| 2.3 Goals and performance indicators should be regularly reviewed | .859 | .014 | -.017 | .003 | .151 |
| 2.4 The strategic plan should have clear timeframes and resources for the achievement of goals | .915 | .002 | -.015 | -.126 | .067 |
| 2.5 Regular review of the nature and extent of the unit's responsiveness is used to give effect to institutional goals and priorities | .867 | .011 | .006 | -.040 | .150 |
| 2.6 The unit should contribute towards institutional goals | .922 | -.008 | .040 | .032 | -.030 |
| 2.7 Reliability is important: the service is performed right the first time | .811 | .097 | -.110 | .060 | .093 |
| 2.8 There are adequate links between planning, resource allocation and quality management | .781 | .094 | -.081 | .169 | .011 |
| 3.2 There are adequate links between planning, resource allocation and quality management | .069 | .057 | .090 | .054 | .796 |
| 3.3 The organisation maintains a work environment that contributes towards satisfaction and motivation of all staff | .079 | .043 | .046 | .083 | .854 |
| 3.4 Resources should be provided specifically for the service | .006 | -.038 | .260 | .161 | .629 |

| | Component | | | | |
|---|-----------|-------|-------|-------|------|
| | 1 | 2 | 3 | 4 | 5 |
| 4.1 Policies and procedures should be approved | .041 | .029 | -.045 | .915 | .052 |
| 4.2 The unit's policy must be turned into plans and actions | .039 | -.016 | -.038 | .914 | .078 |
| 4.3 The administrative staff shall be supported by adequate policies and services | -.023 | .041 | .081 | .907 | .004 |
| 5.1 Self-evaluation determines: The implementation of policies and procedures. The extent to which strategic goals are met. Quality improvement needs from staff, student, employer and stakeholder surveys. The quality to which stakeholder enquiries are handled. The record-keeping. The success of the Total Quality Management drive within the function | .029 | .029 | .858 | .026 | .011 |
| 5.2 Top Management should obtain feedback directly | .033 | .039 | .845 | .026 | .062 |
| 5.3 There should be stakeholder surveys on quality provision | -.013 | .055 | .917 | -.056 | .093 |

This shows that there is a possibility that this criterion can be removed from the list. At this point, all the factor loadings were positive and a further Scale Purification was done to strengthen the criteria by removing item 2.1 in table 4.4 as well. This yielded the final pattern matrix in table 4.5.

Table 4.4: The pattern matrix for the Factor Analysis after the additional removal of item 2.1

| | Component | | | | |
|---|-----------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 1.1 The unit has developed its vision, mission and values | -.080 | .740 | .106 | .143 | -.075 |
| 1.2 There is clear understanding of the essence of the support unit | .081 | .818 | .005 | -.018 | .107 |
| 1.3 The unit should state how it developed its vision, mission and values | -.032 | .891 | .005 | .065 | -.109 |
| 1.4 The purpose statement will determine the unit's aims and objectives | .143 | .847 | -.050 | -.005 | .010 |
| 1.5 The purpose must be clearly stated in response to the local, national and international context | .051 | .882 | -.060 | -.124 | .147 |
| 1.6 There should be involvement of all internal and external stakeholders in the process | -.038 | .779 | .132 | .006 | -.015 |
| 2.2 There should be progress towards the goals | .766 | -.010 | .167 | .056 | -.115 |
| 2.3 Goals and performance indicators should be regularly reviewed | .854 | .003 | .004 | -.022 | .132 |
| 2.4 The strategic plan should have clear timeframes and resources for the achievement of goals | .917 | -.018 | .018 | -.135 | .025 |
| 2.5 Regular review of the nature and extent of the unit's responsiveness is used to give effect to institutional goals and priorities | .877 | -.012 | .039 | -.059 | .105 |
| 2.6 The unit should contribute towards institutional goals | .935 | -.025 | .081 | .021 | -.076 |
| 2.7 Reliability is important: the service is performed right the first time | .852 | .070 | -.076 | .050 | .049 |
| 2.8 The unit's assurance: knowledge and courtesy of employees help them to inspire and trust confidence | .823 | .074 | -.041 | .158 | -.029 |
| 3.2 There are adequate links between planning, resource allocation and quality management | .037 | .042 | .024 | .012 | .849 |
| 3.3 The organisation maintains a work environment that contributes towards satisfaction and motivation of all staff | .054 | .027 | -.033 | .038 | .916 |
| 3.4 Resources should be provided specifically for the service | -.045 | -.029 | .181 | .121 | .721 |

| | Component | | | | |
|--|-----------|-------|-------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| 4.1 Policies and procedures should be approved | .040 | .037 | -.038 | .894 | .074 |
| 4.2 The unit's policy must be turned into plans and actions | .061 | -.025 | -.012 | .896 | .066 |
| 4.3 The administrative staff shall be supported by adequate policies and services | -.003 | .037 | .095 | .899 | .006 |
| 5.1 Self-evaluation determines: The implementation of policies and procedures. The extent to which strategic goals are met. Quality improvement needs from staff, student, employer and stakeholder surveys. The quality to which stakeholder enquiries are handled. The record –keeping. The success of the Total Quality Management drive within the function | .048 | .024 | .879 | .011 | -.040 |
| 5.2 Top Management should obtain feedback directly | .023 | .031 | .852 | .028 | .057 |
| 5.3 There should be stakeholder surveys on quality provision | -.014 | .037 | .922 | -.048 | .076 |

The structure and the validity of the criteria appeared more stable after Scale Purification. All the factor loadings appeared strongly positive. The total percentage variance explained changed from 77.50 before Scale Purification to 80.41 after Scale Purification; the last value indicated in table 4.6.

Items 2.2 to 2.9 are strongly correlated and measure in the same cluster and therefore there is a strong internal validity after the Factor Analysis was done.

This change from 77.50% before Scale Purification to 80.41% after Scale Purification implies that 80.41% of the variance is explained by the five factors. The objective to obtain a list of criteria is reached using Factor Analysis with the criteria 2.1 “strategic goals and performance indicators” have been removed. The Factor Analysis confirms that respondents agreed to the criteria. This implies that there is a possibility that the criterion “resourcing and funding” can be removed from the list.

Table 4.5: Total variance explained for Scale-Purified generic criteria

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings (a) |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|---------------------------------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total |
| 1 | 11.757 | 48.987 | 48.987 | 11.757 | 48.987 | 48.987 | 9.274 |
| 2 | 2.434 | 10.140 | 59.128 | 2.434 | 10.140 | 59.128 | 7.742 |
| 3 | 2.180 | 9.083 | 68.210 | 2.180 | 9.083 | 68.210 | 6.911 |
| 4 | 1.642 | 6.842 | 75.053 | 1.642 | 6.842 | 75.053 | 5.688 |
| 5 | 1.286 | 5.358 | 80.410 | 1.286 | 5.358 | 80.410 | 4.937 |
| 6 | .709 | 2.953 | 83.363 | | | | |
| 7 | .572 | 2.382 | 85.745 | | | | |
| 8 | .544 | 2.265 | 88.010 | | | | |
| 9 | .415 | 1.728 | 89.739 | | | | |
| 10 | .339 | 1.410 | 91.149 | | | | |
| 11 | .282 | 1.175 | 92.324 | | | | |
| 12 | .260 | 1.085 | 93.409 | | | | |
| 13 | .235 | .980 | 94.389 | | | | |
| 14 | .207 | .864 | 95.253 | | | | |
| 15 | .176 | .734 | 95.987 | | | | |
| 16 | .169 | .706 | 96.693 | | | | |
| 17 | .161 | .670 | 97.363 | | | | |
| 18 | .138 | .577 | 97.940 | | | | |
| 19 | .125 | .522 | 98.462 | | | | |

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings (a) |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|---------------------------------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total |
| 20 | .092 | .382 | 98.844 | | | | |
| 21 | .087 | .362 | 99.206 | | | | |
| 22 | .080 | .335 | 99.540 | | | | |
| 23 | .063 | .261 | 99.801 | | | | |
| 24 | .048 | .199 | 100.000 | | | | |

The results of the Factor Analysis illustrate the significance of component 1, which relates to the criterion “Leadership, Vision, Mission and Values”. This shows that it has a high eigenvalue, highlighting the importance of this criteria. It must also be noted that the first five eigenvalues are greater >1. Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from the questionnaires. The higher the score, the more reliable the scale is. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature.

Questions using Likert-type scales were administered. Two common factors were extracted during Factor Analysis and were interpreted to represent “clear strategic goals and performance indicators” and “resourcing and funding”

Cronbach’s Alpha is an index of reliability associated with variation accounted for by the true score of the “underlying construct.” Construct is a hypothetical variable that is being measured.

The Scree Plot of Scale-Purified criteria is shown in figure 4.1 below. A Scree Plot is a plot of the variance associated with each factor, and is used to determine how many factors should be kept in the analysis (Cohen *et al.*, 2004). In this case, five factors should be retained, since they do not follow on the straight line extrapolated from points 6 to 24.

Scree Plot

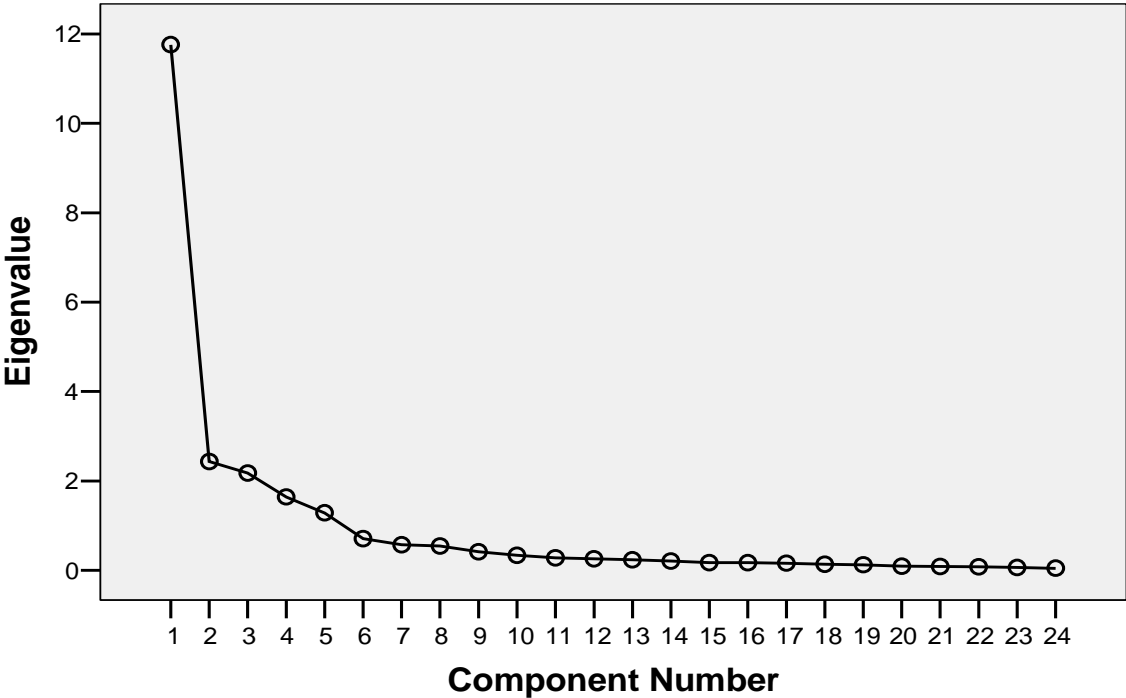


Figure 4.1: Scree plot of scale purified criteria

Table 4.6 shows that all the sub-sections correlate well with each other and the questionnaires correlate well with the sets. Cronbach Alpha and Factor Analysis confirms that it is a comprehensive final list of criteria. The finalised data for the modified generic criteria, including the SPSS calculated Cronbach Alpha for each set of items, are shown in table 4.6.

Table 4.6: Summary result of Cronbach Alpha and Factor Analysis after Scale Purification

| Criterion | | Reliability Coefficients (alphas) | Factor loading of items on criteria to which they belong |
|--|---|-----------------------------------|--|
| Criterion 1 – Leadership, vision, mission and values | 1 | 0.923 | |
| 1.1 | | | 0.74 |
| 1.2 | | | 0.82 |
| 1.3 | | | 0.89 |
| 1.4 | | | 0.85 |
| 1.5 | | | 0.88 |
| 1.6 | | | 0.78 |
| Criterion 2 – Strategic goals & performance indicators | 2 | 0.954 | |
| 2.1 | | | X |
| 2.2 | | | 0.77 |
| 2.3 | | | 0.85 |
| 2.4 | | | 0.92 |
| 2.5 | | | 0.88 |
| 2.6 | | | 0.94 |
| 2.7 | | | 0.85 |
| 2.8 | | | 0.82 |
| 2.9 | | | 0.72 |

| Criterion | | Reliability Coefficients (alphas) | Factor loading of items on criteria to which they belong |
|---|---|-----------------------------------|--|
| Criterion 3 – Resourcing and funding | 3 | 0.850 | |
| 3.1 | | | X |
| 3.2 | | | 0.85 |
| 3.3 | | | 0.92 |
| 3.4 | | | 0.72 |
| 3.5 | | | X |
| 4.1 Criterion 4 - Policies and procedures | 4 | 0.921 | |
| 4.1 | | | 0.89 |
| 4.2 | | | 0.90 |
| 4.3 | | | 0.90 |
| Criterion 5 – Self evaluation guidelines | 5 | 0.939 | |
| 5.1 | | | 0.88 |
| 5.2 | | | 0.85 |
| 5.3 | | | 0.92 |

From the various statistics presented, the five modified generic criteria appear valid in terms of the Factor Analysis and the sets of items themselves are reliable (Cronbach Alpha greater than 0,7 in all cases). Cronbach Alpha is a measurement of the reliability and relevance of the criteria to the underlying factor. It is an unbiased estimate of reliability. The highest value that a Cronbach Alpha can be is 1.000. In this study, all the alphas are close to 1.000 which illustrates that criteria 1 to 5 are reliable. Criterion 2 has an Alpha of 0.954 and is the most reliable. Criterion 3 with an Alpha reading of 0.850 is significantly reliable. The higher the Alpha the more significant the underlying criteria. According to the results, the third objective has been achieved.

4.3 DISCUSSION OF RESULTS

4.3.1 Generic criteria results: 1–5

As part of the Factor Analysis, criterion 2.1 “clearly stated goals and performance indicators”, 3.1 “adequate resourcing and funding for the unit” and 3.5 “tangibles” were removed during Scale Purification. However, it was found that criterion 2.1, which was removed at the final stage of purification, should perhaps be maintained, since all components were already positive at this stage, and having clear strategic goals and performance indicators is of paramount importance to such units. Similarly, with regard to the question of “adequate resourcing” (3.1), even though it is not the direct responsibility of the unit the result shows that it should be further investigated with the service quality aspects of the unit, for example 3.5.

The results revealed that the original Factor Analysis data, without further purification, would also have indicated the validity of the data, but that “self-evaluation guidelines” would then have appeared strongly negative in relation to the other criteria.

4.3.2 Specific criteria results: 6-19

The agreement on the criteria by the selected support units seems to suggest that the evaluation criteria researched for this study are useful for evaluation purposes. One has to bear in mind, however, that the evaluation of a support unit encompasses not just performance with regard to the internal set of criteria, but also that the results of such an evaluation would be affected by the perceptions of institutional staff and learners who interact with such units. This impact is measured by user surveys as part of self-evaluation. It is therefore possible that the management of the Registration Department believes internally that they are doing well, but that the general perception amongst their clients is that of poor service. Benchmarking with similar support units in other institutions should be performed to try and prevent problem areas and improve the overall manner of operation. This particular study did not concentrate on the output of the review, which would identify such perceptions, but rather the criteria themselves against which the unit should be evaluated.

4.4 CHAPTER SUMMARY

Chapter 4 presented the data analysis consisting of validity testing (Factor Analysis) and reliability testing (Cronbach Alpha), which were carried out on five generic criteria. After Scale Purification the results proved to be both valid and reliable. The principle axis factoring procedure was used and subjected to oblique rotation. Good internal consistency was found amongst the items for each criterion, which validates the results. During the interviews with the Directors and Heads of Departments, it was found that they had added some criteria to this study.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

The problem that this study set out to review is that suitable evaluation criteria have not been formalised for selected administration and support systems in South African higher education institutions. The starting point for this review was the current use of the Coetzee Model for support system evaluation at the Cape Peninsula University of Technology, and an understanding of the criteria being used in the context of other international and national quality models as presented in the literature. From this and subsequent research at selected support units in South Africa, a more formalised set of criteria was developed which could ultimately be used for evaluations.

5.1 SUMMARY OF THE RESEARCH

Chapter 1 indicated that there was a national focus on the role of quality assurance as a tool for ensuring academic quality in South Africa. The implied assumption was that administration and support units were capable of evaluating their own performance. The focus on the core process in higher education institutions was discussed, and the issue that all support units fundamentally contribute to the success of this process was highlighted. The question, however, remained as to what criteria should be used for evaluating such support units in order to achieve the required fitness for purpose.

Chapter 2 presented the literature review of this study, highlighting the research focus on service quality, with specific reference to the work of Parasuraman *et al.* (1988). A range of quality models were then discussed, starting with internationally and nationally accepted quality models such as the Baldrige National Quality Programme for Education (BNQP), ISO 9001:2000, the European Foundation for Quality Management (EFQM) Excellence Model, Parasuraman's Gap Model, Servqual, the South African Excellence Model (SAEM) and the Coetzee Model. A comparison was made between these models in terms of their principles, the criteria used and their structure. It was found that the Coetzee Model adequately met the needs of and criteria for such models, as shown in table 2.6. However some criteria needed to be included. A further comparison of the Coetzee Model criteria against those of the South African Qualifications Authority (SAQA) and the Higher Education Quality Committee (HEQC) confirmed that there was a relationship between the criteria for research purposes. Using the Coetzee Model as a basis, the criteria and components (subcriteria) of this model were presented, and adjusted with the elements of "reliability", "responsiveness", "assurance", "empathy" and "tangibles" from the Servqual Model. The first five criteria of the adjusted version represented the generic criteria, focusing on the external environment and domain of the support unit, whereas the next 14 criteria were specific to the processes within each of the support units selected for this study.

Chapter 3 outlined the research instruments and tools, as well as the research design and methodology, used in this study. Qualitative and quantitative research, the design of the questionnaire, sampling and interviews were discussed. Preliminary work in the form of a pilot study was done and a Support Systems Model was developed. The overall population of support systems at higher education institutions was indicated. The sample selection for research purposes was taken from 15 support systems at each of the 23 South African higher education institutions. The initial response was received by electronic mail, faxes and mail, and resulted in a study population of 345 units, from which 199 responses were received which were supplemented with telephonic questionnaire administration. The 199 responses were an acceptable number for statistical analysis of validity and reliability for the 5 generic criteria, whereas the low return per unit for specific criteria indicated a more basic statistical approach. Personal interviews were planned with some of the respondents in the Western Cape, in line with convenience sampling, to supplement the information from the questionnaire.

Chapter 4 presented the data analysis of this study. A Factor Analysis (validity) and Cronbach Alpha test (reliability) were carried out on the criteria. After Scale Purification, the data showed that the criterion components were both valid and reliable. The principal axis factoring procedure was used and subjected to oblique rotation (using SPSS). This allowed for intercorrelation between dimensions which facilitated its interpretation. The Cronbach Alpha values ranged from 0.850 to 0.953, showing good internal consistency among the items in each criterion. Since the size of the specific criteria sample did not lend itself to the rigour of validity and reliability testing, as was the case with the five generic criteria, the data were analysed using means and standard deviations. An interview process, based on convenience sampling, was conducted with the Heads of Department of certain support units in the Western Cape in order to reinforce the fitness for purpose of the research questions.

5.2 CONCLUSION

Based on the results of this study, it would appear that the first objective, to investigate criteria available from existing related models and literature, has been met in that it provided an understanding of the current availability of such criteria from an international and national perspective.

The second objective to develop a model has also been completed in the form of a Support Systems Model.

The final objective, to develop a final list of generic and specific evaluation criteria, are presented in Appendix Q. Suitable modifications were indicated in respect of the research outcomes as presented above and in chapter 4 of this study.

There was general agreement amongst respondents of the selected support units concerning the generic and specific criteria and the manner in which they were presented to them. The need for support unit evaluations is encouraged by both the literature and respondents, suggesting that higher education institutions should perform evaluations and monitoring of support systems at regular intervals to ensure that staff and students are satisfied with such services.

5.3 RECOMMENDATIONS

There is a need to expand this study to other support units and to determine the suitability of the generic evaluation criteria indicated and the development of further specific criteria in such instances.

There is a need for higher education institutions to implement self-evaluation in support units and to monitor the improvement plans developed as a result on a regular basis.

It is important for quality and support staff to be train in implementing plans and evaluating their outcomes against the suggested criteria.

Question 2 included in the generic criteria “goals and performance indicators” should be changed to “strategic plan” since it includes both of it. There would then be a relationship with criterion 2 of the CHE’s criteria for institutional audits.

As indicated by the literature review, a relevant research item needs to be added for each unit to ensure that effective arrangements are in place for implementing quality assurance, and developing and monitoring research functions and postgraduate education. During the interview with the Head of Department of Student Counselling, it was confirmed that research is one of their key processes.

Quality-related arrangements for community engagement, where appropriate, should be adequately resourced and monitored for each unit.

Once evaluations and surveys have been conducted on support units, the process of benchmarking should be used to prevent potential problems and address problems that do occur.

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APPENDIX A: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR SUPPORT SYSTEMS

(Generic questionnaire)

This research aims to identify a suitable set of criteria for support systems and to distribute it amongst participants, asking them to respond to the given criteria stating whether the criteria would be able to be used at higher education institutions.

Please complete the questionnaire as accurately as possible. Participants are requested to evaluate the statements themselves for validity and applicability and not to evaluate their units against these statements.

Read the following carefully and mark your response in the relevant box with an X.

(SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree, DK = Don't Know)

| CRITERION 1: | | SA | A | D | SD | DK |
|---|--|-----------|----------|----------|-----------|-----------|
| Leadership with respect to vision and mission and values | | | | | | |
| 1.1 | The unit has developed and communicated its vision, mission and values (Coetzee, 1999). | | | | | |
| 1.2 | There is clear understanding of the essence of the support unit, why it exists and where the senior leaders want to take it in future (US NIST, 2004). | | | | | |
| 1.3 | The unit should state how it has developed its vision, mission and values, eg. by getting people involved (SAEF, 1997). | | | | | |
| 1.4 | The purpose statement will determine the unit's aims and objectives (SAQA, 2001). | | | | | |
| 1.5 | The purpose must be clearly stated in response to the local, national and international context (CHE, 2004). | | | | | |
| 1.6 | There should be involvement of internal and external stakeholders in the process (CHE, 2004). | | | | | |

| CRITERION 2 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Clear strategic goals and performance indicators. | | | | | | |
| 2.1 | There are clearly stated strategic goals and performance indicators (Coetzee, 1999). | | | | | |
| 2.2 | There should be progress towards the goals and indications of what stage the unit is in towards achieving the goals (US NIST, 2004). | | | | | |
| 2.3 | Goals and performance indicators should be regularly reviewed (SAEF, 1997). | | | | | |
| 2.4 | The strategic plan should have clear timeframes and resources for the achievement of goals (CHE, 2004). | | | | | |
| 2.5 | Regular review of the nature and extent of the unit's responsiveness is used to give effect to institutional goals and priorities (Parasuraman <i>et al.</i> , 1985). | | | | | |
| 2.6 | The unit should contribute towards institutional goals. | | | | | |
| 2.7 | Reliability is important: the service is performed right the first time (Parasuraman <i>et al.</i> , 1985). | | | | | |
| 2.8 | The unit's assurance: knowledge and courtesy of employees help them to inspire trust and confidence (Parasuraman <i>et al.</i> , 1985). | | | | | |
| 2.9 | Empathy: Employees give customers caring, individualised attention (Parasuraman <i>et al.</i> , 1985). | | | | | |

| CRITERION 3 | | SA | A | D | SD | DK |
|--------------------------------|---|-----------|----------|----------|-----------|-----------|
| Resourcing and funding | | | | | | |
| 3.1 | The unit is adequately resourced and funded in terms of budgets, management, infrastructure, staff, workstations and staff development (Coetzee, 1999). | | | | | |
| 3.2 | There are adequate links between planning, resource allocation and quality management (CHE, 2004). | | | | | |
| 3.3 | The organisation maintains a work environment that contributes towards satisfaction and motivation of all staff (US NIST, 2004). | | | | | |
| 3.4 | Resources should be provided specifically for the service (ISO, 2000a). | | | | | |
| 3.5 | Tangibles: The equipment must be up-to-date and the physical facilities must be visually appealing (Parasuraman <i>et al.</i> , 1985). | | | | | |
| CRITERION 4 | | SA | A | D | SD | DK |
| Policies and procedures | | | | | | |
| 4.1 | Handbooks should be in place for support units which have been approved and aligned with the institution. Policies and procedures for the unit's evaluation should be included (Coetzee, 1999). | | | | | |
| 4.2 | The unit's policy must be turned into plans and actions. | | | | | |
| 4.3 | The administrative staff shall be supported by adequate policies and services. | | | | | |

| CRITERION 5: Self-evaluation guidelines | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| 5.1 | <p>Self-evaluation determines:</p> <p>The implementation of policies and procedures</p> <p>The extent to which strategic goals are met</p> <p>Quality improvement needs from staff, student, employer and stakeholder surveys</p> <p>The quality with which stakeholder enquiries are handled</p> <p>The record-keeping</p> <p>The success of the Total Quality Management drive within the function (Coetzee, 1999).</p> | | | | | |
| 5.2 | <p>Top Management should obtain feedback directly on the efficiency of the Quality Management System (ISO, 2000a).</p> | | | | | |
| 5.3 | <p>There should be stakeholder surveys on quality provision.</p> | | | | | |

APPENDIX B: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR STUDENT COUNSELLING

(Coetzee, 1999)

| CRITERION 6 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 6.1 | Student counsellors must reflect core competencies in the demonstration of their unique role and functions e.g counsellors' professional responsibility, offering a counselling/therapeutic service, career development, student development service, academic and learning skills development, advocacy and consultation service, training, assessment as part of the admissions process and community outreach. | | | | | |
| 6.2 | Counsellors' professional responsibilities include: Legal understanding of crisis intervention Knowing ethical standards Practising integrity and proper judgement. | | | | | |
| 6.3 | Counselling/therapeutic service that: Provides for personal, career and educational development and promotes wellness Has qualified personnel Includes rehabilitative, curative and preventative components Co-operates with a referral network and with health services Includes psychometric and psychological tests Keeps records locked up and confidential and Has specific measures, policies and procedures for crisis intervention. | | | | | |

| | | | | | | |
|-----|---|--|--|--|--|--|
| 6.4 | <p>Career development service that:</p> <p>Educates students and prospective students about career opportunities</p> <p>Trains students for job-hunting and employment</p> <p>Supports alumni during career transitions and</p> <p>Provides graduate placement.</p> | | | | | |
| 6.5 | <p>Student development service that:</p> <p>Orientates students through preparation programmes</p> <p>Empowers students through developmental and preventative workshops e.g. stress management</p> <p>Provides personal development programmes and leadership that prepares students e.g. community awareness, multicultural and gender; and</p> <p>Provides resources such as leaflets and brochures.</p> | | | | | |
| 6.6 | <p>Academic and Learning Skills Development Services that focus on:</p> <p>Identification of learning environmental impediments</p> <p>Improving learning and study skills</p> <p>Cognitive skills training</p> <p>Collaboration with academic faculties</p> <p>Access courses</p> <p>Provision of resources such as leaflets, study skills packages, etc</p> <p>Assistance to disabled students or other students with specific needs and</p> <p>Consulting, advising and mediating on behalf of stakeholders.</p> | | | | | |

| | | | | | | |
|------|---|--|--|--|--|--|
| 6.7 | <p>Advocacy and consultation service that:</p> <p>Assists students in extenuating circumstances</p> <p>Campaigns for assistance to disabled students or groups with specific needs and</p> <p>Consults, advises and mediates on behalf of stakeholders.</p> | | | | | |
| 6.8 | <p>Training:</p> <p>Contributions towards academic and tutorial staff training</p> <p>Contributions towards support staff training and</p> <p>Training peer helpers.</p> | | | | | |
| 6.9 | <p>Assessment as part of the admissions process</p> <p>Assessment of prospective students and</p> <p>Research on admission criteria, assessment techniques and instruments.</p> | | | | | |
| 6.10 | <p>Community outreach</p> <p>Community outreach programmes.</p> | | | | | |

APPENDIX C: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR STUDENT DEVELOPMENT

(Coetzee, 1999)

| CRITERION 7 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 7.1 | <p>Student development should provide for leadership development, sports, student political groups, cultural, religious and social societies as well as appropriate forms of communication and support for off-campus students.</p> <p>In order to meet the criterion, the following are required:</p> <p>Student development and support that:</p> <p>Provides orientation co-ordination to students entering the institution for the first time</p> <p>Evaluates the services of orientation programme and</p> <p>Changes the orientation programme where necessary.</p> | | | | | |
| 7.2 | <p>Leadership development that:</p> <p>Engages elected leaders of student structures, for example, assisting with the interaction at faculty level and support services</p> <p>Engages staff in student social development, for example, getting volunteers for leadership programmes</p> <p>Provision for leadership that caters for a diverse student body (CHE, 2005).</p> | | | | | |
| 7.3 | <p>Administrative services which:</p> <p>Make provision for SRC administration such as correspondence, filing and liaison with institutional departments.</p> | | | | | |

| | | | | | | |
|-----|---|--|--|--|--|--|
| 7.4 | <p>SRC Elections:</p> <p>An Independent Election Committee deals with nominations, voter's lists, co-ordinating election officers, inauguration of the new SRC and election reports.</p> | | | | | |
| 7.5 | <p>Cultural Programme:</p> <p>Organises artistic talent shows, artistic talent workshops, showcases and local drama productions.</p> | | | | | |
| 7.6 | <p>Writing Centre:</p> <p>Provision of computers, resources for student use, support with assignments and language support.</p> | | | | | |
| 7.7 | <p>Driver Education:</p> <p>Learner's instruction, booking of appointments, driver's instruction and driver's test support.</p> | | | | | |
| 7.8 | <p>Sports administration:</p> <p>Facilities management and</p> <p>Sports equipment and club administration.</p> | | | | | |

APPENDIX D: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR HEALTH AND SAFETY

(Coetzee, 1999)

| CRITERION 8 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 8.1 | <p>Students and staff should have effective health and safety mechanisms in place such as building safety and health auditing, residence safety and health auditing, safety promotion and communication and waste recycling.</p> <p>In order to meet the criterion the following are required:</p> <p>Building safety and health auditing which:</p> <p>Ensures that all facilities including buildings, installations, storage areas, sanitary facilities and technical work areas meet the requirements of relevant laws and regulations.</p> | | | | | |
| 8.2 | <p>Residence safety and health auditing which:</p> <p>Ensures that all food preparation, storage and handling procedures are in accordance with health laws, regulations and codes of good practices.</p> | | | | | |
| 8.3 | <p>Safety promotion and communication which:</p> <p>Provides training and awareness programmes to staff and students as required by legislation and internal policies.</p> | | | | | |
| 8.4 | <p>Waste recycling.</p> <p>Implement an effective waste management system.</p> | | | | | |
| 8.5 | Laboratory safety and health auditing. | | | | | |
| 8.6 | Safety and health policy of the institution. | | | | | |
| 8.7 | All outside contractors coming onto the campus must comply with relevant health and safety regulation. | | | | | |

| CRITERION 8 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 8.8 | Manage an effective system to prevent occupational injuries and diseases. | | | | | |
| 8.9 | Manage an effective compensation system. | | | | | |

APPENDIX E: QUESTIONNAIRE ON QUALITY EVALUATION - CRITERIA FOR STUDENT HOUSING (Coetzee, 1999)

| CRITERION 9 | | SA | A | D | SD | DK |
|-------------|--|----|---|---|----|----|
| | <p>Effective student housing should provide residence admissions control, room allocation, residence supervision, security and access control, catering services, room quality, recreation and development, laundry, cleaning control, admission and induction of foreign students to the residence.</p> <p>In order to meet the criterion the following are minimum requirements:</p> | | | | | |
| 9.1 | <p>Residence admissions control:</p> <p>Implemented according to a documented procedure.</p> | | | | | |
| 9.2 | <p>Room allocation:</p> <ul style="list-style-type: none"> • Implemented according to a documented procedure. | | | | | |
| 9.3 | Residence supervision. | | | | | |
| 9.4 | <p>Security and access control:</p> <ul style="list-style-type: none"> • Fire exit doors should be locked • Formal fire drills and • Alcohol and assault prevention. | | | | | |
| 9.5 | <p>Catering services:</p> <ul style="list-style-type: none"> • Hygiene audits should be done regularly. | | | | | |
| 9.6 | <p>Room quality:</p> <ul style="list-style-type: none"> • The rooms should be sufficiently furnished and • There should be sufficient study facilities. | | | | | |
| 9.7 | <p>Recreation and development:</p> <ul style="list-style-type: none"> • Functions are available for recreation. | | | | | |
| 9.8 | <p>Laundry:</p> <ul style="list-style-type: none"> • Adequate laundry facilities. • Maintenance of the machines. | | | | | |
| 9.9 | <p>Cleaning control:</p> <ul style="list-style-type: none"> • All areas should be regularly cleaned according to specified requirements. | | | | | |
| 9.10 | <p>Admission and induction of foreign students</p> <ul style="list-style-type: none"> • There is an induction for foreign students. | | | | | |
| 9.11 | Office administration should be available for students when required. | | | | | |

APPENDIX F: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR FINANCIAL AID

(National Students Financial Aid Scheme, 2004)

| CRITERION 10 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 10.1 | <p>Disseminating Information</p> <p>Students should be informed and there should be evidence of the availability of financial assistance from NSFAS utilising resources such as the following:</p> <p>Letters and leaflets</p> <p>Informative posters</p> <p>Information booklets and</p> <p>Advertising in local newspapers.</p> | | | | | |
| 10.2 | <p>Inviting the application:</p> <p>There must be adequate evidence that the relevant application forms were readily available to all students and that there was sufficient stock of these forms and NSFAS application forms should not be provided to students as these forms are legal documents and should only be used once the loan is granted.</p> | | | | | |
| 10.3 | <p>Testing eligibility:</p> <p>Firstly, does the institution ensure compliance with the following eligibility criteria:</p> <p>Must be a citizen of South Africa</p> <p>Must be accepted as a registered student at the institution</p> <p>Studying towards a first tertiary qualification</p> <p>Studying towards a second educational qualification</p> <p>Judged to be able to succeed</p> <p>Financially needy and</p> <p>Unable to finance his/her studies without a NSFAS Award.</p> | | | | | |

| CRITERION 10 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| | <p>Secondly, the potential to succeed:</p> <p>Do financial aid officers have access to academic records of the students applying for an award?</p> <p>What information is obtainable for first years to determine if the student has potential to succeed?</p> <p>Does the institution ensure that qualifying students are registered for courses that can be completed in the following ratios:</p> <p>2 year course in 3 years</p> <p>Any course which can be completed in 3, 4, 5 or 6 years within 5, 6, 7 or 8 years respectively.</p> | | | | | |
| | <p>Thirdly, financial need</p> <p>Have procedures for implementing the NSFAS means test by 01/10/2002 been put in place?</p> <p>Does the institution have a copy of the means test on file?</p> <p>Does the means test identify who the neediest students are?</p> <p>Indicate which of the following means are utilised at the institution if the</p> <p>NSFAS means test is not used:</p> <p>Calculation of the gross annual family income.</p> <p>Per capita income.</p> <p>Questionnaire and interview.</p> <p>National disposable income.</p> <p>Determine whether or not the means test in use is identifying only the most financially needy students.</p> <p>Availability of alternative sources of financing studies.</p> | | | | | |
| | <p>Do financial aid officers have access to the student's fee accounts that are scrutinised to determine any other sources of funding?</p> | | | | | |

| CRITERION 10 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| | Do the financial aid officers ensure that family contributions are seen as alternative means of financial contribution? | | | | | |
| 10.4 | Determining the size of the loan Determine the formula used to calculate the size of the loan. Does this formula comply with the NSFAS award formula? | | | | | |
| | If all other NSFAS requirements are met: In cases where the required award is greater than or equal to the maximum award was the allowed maximum award granted (R17,600)? | | | | | |
| | Identify cases where loans that exceed the permissible amounts were granted and obtain reasons for such grants. | | | | | |
| | Where loans that exceed the permissible amount received as first payment. | | | | | |
| | Where insufficient funds were available to pay over to needy applicants did the most needy applicants with the highest potential to succeed receive funding first? | | | | | |
| 10.5 | Granting the loan: Did the institution highlight the interest on the loan to the recipients? | | | | | |
| | Was the difference between loan and bursary and the up to 40% rebate component of the loan explained to the student? | | | | | |
| | Were students made aware of the contents of the loan agreement form before signing the document? | | | | | |
| | Was each page of the loan agreement form signed by the student to accept the correctness and to indicate understanding of its contents? | | | | | |
| | Was the validity of the ID numbers checked? NSFAS has made a web page available for this purpose. | | | | | |
| | Has a copy of the ID's been made and kept on file at the | | | | | |

| CRITERION 10 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| | Financial Aid office and at NSFAS? | | | | | |
| | Who is responsible for crediting the student's fee account, which person is responsible for doing this? | | | | | |

APPENDIX G: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR HUMAN RESOURCES

(Coetzee, 1999)

| CRITERION 11 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 11.1 | This criterion describes the extent to which human resources practices and processes are being successfully managed. These include policies, procedures and evidence of implementation of: A manpower plan (organograms, new posts control and records thereof, job descriptions and job grading); | | | | | |
| 11.2 | Staffing plans (integration with strategic and manpower plans, recruitment and selection, appointment of permanent, temporary and contract staff, orientation and probation, salaries and benefits, general conditions of service, leave management); | | | | | |
| 11.3 | Performance appraisal initiatives (objective setting, staff appraisal, career development); | | | | | |
| 11.4 | Staff development (staff training and skills development); | | | | | |
| 11.5 | Disciplinary measures; | | | | | |
| 11.6 | Equity and transformation process; | | | | | |
| 11.7 | HIV/AIDS awareness; | | | | | |
| 11.8 | Disability handling; | | | | | |
| 11.9 | Sexual harassment policies; | | | | | |
| 11.10 | Implementation of relevant Acts: Labour Relations Act, Higher Education Act, Basic Conditions of Employment Act, Employment Equity Act, Skills Development; | | | | | |

| CRITERION 11 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 11.11 | Organisational culture management; | | | | | |
| 11.12 | Collective agreement between institutions and unions; | | | | | |
| 11.13 | Study concessions for staff; | | | | | |
| 11.14 | Medical Aid provision; and | | | | | |
| 11.15 | Pension Fund provision. | | | | | |

**APPENDIX H: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR
MARKETING**

(Coetzee, 1999)

| CRITERION 12 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 12.1 | This criterion describes the extent to which MARKETING practices and processes are being successfully managed. These include policies, procedures and evidence of implementation of: Fundraising; | | | | | |
| 12.2 | Marketing services; | | | | | |
| 12.3 | Public relations services; | | | | | |
| 12.4 | Alumni Office; | | | | | |
| 12.5 | Publications control; | | | | | |
| 12.6 | Corporate identity; | | | | | |
| 12.7 | Media liaison; and | | | | | |
| 12.8 | Institutional public affairs management. | | | | | |

**APPENDIX I: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR
INFORMATION AND COMMUNICATION TECHNOLOGY**

(Coetzee, 1999)

| CRITERION 13 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 13.1 | This criterion describes the extent to which information technology practices and processes are being successfully managed. These include policies, procedures and evidence of implementation of: Information Technology Systems (configuration control and support of academic programme needs, student based needs, financial system, human resources, fixed assets, campus space, financial aid, co-operative education, alumni systems, registrations). | | | | | |
| 13.2 | Computing facilities management (configuration control and change management of Unix and Oracle support, peripheral interfacing to integrated system, computer environment management, printer consumables, printer maintenance, SLIS library management). | | | | | |
| 13.3 | Internet control (budget control, access control, security and virus control, web-intra and inter-control, network management, bandwidth and availability management). | | | | | |
| 13.4 | Personal computer resources (hardware provision, asset control of hardware and software, upgrading control, applications control {use, licensing, handling, delivery, set-up, support}, resources room access and facilities management, hiring out of resources). | | | | | |
| 13.5 | Local Area Network (file server provision and management, hub and cable management, LAN switching and routing, LAN operations management, back-up, Support and management, remote access provision and management) and | | | | | |

| CRITERION 13 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 13.6 | IT support (Security profiles, virus protection, system upgrade, system and data quality assurance, data back-up, system maintenance, helpdesk). | | | | | |

**APPENDIX J: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR
FINANCE**

(Coetzee, 1999)

| CRITERION 14 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 14.1 | This criterion describes the extent to which finance processes are being successfully managed. These include policies, procedures and evidence of implementation for: Funding control (subsidised and non-subsidised). | | | | | |
| 14.2 | Levies control. | | | | | |
| 14.3 | Bursaries control. | | | | | |
| 14.4 | Budgeting control and link to strategic plan. | | | | | |
| 14.5 | Investment control. | | | | | |
| 14.6 | Debtors and creditors control (including student debtors). | | | | | |
| 14.7 | Income and expenses control. | | | | | |
| 14.8 | Asset control (fixed and movable). | | | | | |
| 14.9 | Purchasing and issue control. | | | | | |
| 14.10 | Salaries and benefits control. | | | | | |
| 14.11 | Cashier control. | | | | | |
| 14.12 | Travel control and | | | | | |
| 14.13 | Statutory returns control. | | | | | |

**APPENDIX K: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR
TECHNICAL SERVICES**

(Coetzee, 1999)

| CRITERION 15 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 15.1 | This criterion describes the extent to which technical processes are being successfully managed. These include policies, procedures and evidence of implementation of: Campus planning (layout, signage, furniture, space allocation). | | | | | |
| 15.2 | Capital works control. | | | | | |
| 15.3 | Maintenance work control (including keys production). | | | | | |
| 15.4 | Hiring of facilities. | | | | | |
| 15.5 | Landscaping and gardening services. | | | | | |
| 15.6 | Communication services (post, telephone, printing, photocopying). | | | | | |
| 15.7 | Transport and | | | | | |
| 15.8 | Protection services (protection plan, security codes, access control, parking control). | | | | | |

APPENDIX L: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR PROTECTION SERVICES

(Coetzee, 1999)

| CRITERION 16 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 16.1 | This criterion describes the extent to which protection services processes are being successfully managed. These include policies, procedures and evidence of implementation of: The availability of a protection plan. | | | | | |
| 16.2 | Control of security codes. | | | | | |
| 16.3 | Access control. | | | | | |
| 16.4 | Assets control. | | | | | |
| 16.5 | Parking control. | | | | | |
| 16.6 | Investigations control and | | | | | |
| 16.7 | Transport. | | | | | |

APPENDIX M: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR REGISTRATIONS

(Coetzee, 1999)

| CRITERION 17 | | SA | A | D | SD | DK |
|---|--|----|---|---|----|----|
| Effectiveness and efficiency of key processes | | | | | | |
| 17.1 | This criterion describes the extent to which registration practices and processes are being successfully managed. These include policies, procedures and evidence of implementation of: Enquiries. | | | | | |
| 17.2 | Application forms data capturing. | | | | | |
| 17.3 | Printing of student cards. | | | | | |
| 17.4 | Processing of changes in information e.g. addresses. | | | | | |
| 17.5 | Proof of registration. | | | | | |
| 17.6 | Validation of reports. | | | | | |
| 17.7 | Outstanding documents. | | | | | |
| 17.8 | Application statistics. | | | | | |
| 17.9 | Maintenance of student files. | | | | | |
| 17.10 | Registration of students and | | | | | |
| 17.11 | Budgetary processes. | | | | | |

APPENDIX N: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR EXAMINATIONS

(Coetzee, 1999)

| CRITERION 18 | | SA | A | D | SD | DK |
|--|---|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 18.1 | This criterion describes the extent to which examination/assessment processes are being successfully managed. These include policies, procedures and evidence of implementation of: Handling, administration and approval of exemptions, credits and recognition for prior learning. | | | | | |
| 18.2 | The accreditation, approval and appointment of internal assessors and moderators. | | | | | |
| 18.3 | The administration of examinations, assignments, projects, research and portfolios. | | | | | |
| 18.4 | The administration of internal and external moderation processes for examinations. | | | | | |
| 18.5 | Completion of assessor and moderator reports. | | | | | |
| 18.6 | The handling of marks. | | | | | |
| 18.7 | Security needs. | | | | | |
| 18.8 | Handling of failures and the need for remarking and | | | | | |
| 18.9 | The handling of administration process for certification of qualifications. | | | | | |

APPENDIX O: QUESTIONNAIRE ON QUALITY EVALUATION CRITERIA FOR LIBRARY

(Coetzee, 1999)

| CRITERION 19 | | SA | A | D | SD | DK |
|--|--|-----------|----------|----------|-----------|-----------|
| Effectiveness and efficiency of key processes | | | | | | |
| 19.1 | This criterion describes the extent to which library processes are being successfully managed. Subject librarianship. | | | | | |
| 19.2 | Cataloguing and indexing. | | | | | |
| 19.3 | Inter-library loans. | | | | | |
| 19.4 | Monitoring utilisation of the library and information services (facilities, reading rooms, noise levels, discussion groups). | | | | | |
| 19.5 | Communication and promotion of the library and information services. | | | | | |
| 19.6 | Copyright issues. | | | | | |
| 19.7 | Photocopying services. | | | | | |
| 19.8 | Stock renewal and | | | | | |
| 19.9 | Library and Information Services performance indicators (books and journals per faculty, per programme, per subject). | | | | | |

APPENDIX P: COVERING LETTER FOR QUESTIONNAIRE

2005-04-04

Dear colleague

QUALITY CRITERIA FOR SUPPORT SYSTEMS

In fulfilment of the requirements for a Masters in Technology: Quality, I am currently conducting research to investigate suitable evaluation criteria for support systems in public Higher Education institutions.

Currently the Higher Education Quality Committee concentrates on programme accreditation and institutional quality assurance.

I am hereby requesting that you please complete the questionnaire as attached. Please assess how far you agree or disagree with the statements in the questionnaire and electronic mail or fax the response back to me by 17 June 2005

Should you have any questions please feel free to contact me at the contact details supplied below.

Yours faithfully

Renee Weideman

Quality Management

Cape Peninsula University of Technology

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BELLVILLE

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APPENDIX Q: FINAL SET OF GENERIC AND SPECIFIC CRITERIA

Criterion 1: Leadership with respect to vision, mission and values.

- 1.1 The unit has developed and communicated its vision, mission and values (Coetzee, 1999).
- 1.2 There is clear understanding of the essence of the support unit, why it exists and where senior leaders want to take it in the future (US NIST, 2004).
- 1.3 The unit should state how it developed its vision and mission and values (for example by getting people involved) (SAEF, 1997).
- 1.4 The purpose statement (vision, mission) will determine the unit's aims and objectives (SAQA, 2001).
- 1.5 The purpose must be clearly stated in response to the local, national and international context (CHE, 2004).
- 1.6 There should be involvement of all internal and external stakeholders in the process (CHE, 2004)

Criterion 2: Clear strategic goals and performance indicators

- 2.1 There are clearly stated strategic goals and performance indicators for this unit. (Coetzee, 1999) (This criteria does not form part of the final list since a suitable result was not obtained after Factor Analysis and Scale Purification).
- 2.2 There should be progress towards the goals and indications of what stage the unit is in towards achieving the goals (US NIST, 2004: 15).
- 2.3 Goals and performance indicators should be regularly reviewed (SAEF, 1997).
- 2.4 The strategic plan should have clear timeframes and resources for the achievement of goals (CHE, 2004).

- 2.5 Regular review of the nature and extent of the unit's responsiveness is used to give effect to institutional goals and priorities (Responsiveness is defined by Servqual as the willingness of employees to help customers and provide prompt service) (Parasuraman *et al.*, 1985).
- 2.6 The unit should contribute towards institutional goals (Coetzee, 1999).
- 2.7 The unit's reliability is important: the service is performed right the first time (From Servqual). Reliability is defined by Servqual as the ability to consistently perform the promised service dependably and accurately (Parasuraman *et al.*, 1985).
- 2.8 The unit's assurance: knowledge and courtesy of employees helps them to inspire trust and confidence (Assurance is defined by Servqual as the knowledge and courtesy of employees and their ability to inspire trust and confidence) (Parasuraman *et al.*, 1985).
- 2.9 The unit's empathy: Employees give customers caring, individualised attention. (From Servqual. Empathy is defined by Servqual as the caring, individualised attention the institution provides its customers) (Parasuraman *et al.*, 1985).

Criterion 3: Resourcing and funding

- 3.1 The unit is adequately resourced and funded in terms of budgets, management, infrastructure, staff, workstations and staff development. (Coetzee, 1999) (This criteria does not form part of the final list since a suitable result was not obtained after Factor Analysis and Scale Purification)
- 3.2 There are adequate links between planning, resource allocation and quality management (CHE, 2004).
- 3.3 The unit maintains a work environment that contributes towards satisfaction and motivation of all staff (US NIST, 2004).
- 3.4 Resources should be provided specifically for the service unit (ISO, 2000a).

- 3.5 The unit's tangibles: The equipment must be up-to-date and the physical facilities must be visually appealing. Tangibles is defined by Servqual as physical facilities, equipment and the appearance of personnel. (Parasuraman *et al.*, 1985) (This criteria does not form part of the final list since a suitable result was not obtained after Factor Analysis and Scale Purification).

Criterion 4: Policies and procedures

- 4.1 Handbooks should be in place for support units which have been approved by and aligned with the institution. Policies and procedures for the unit's evaluation should be included (Coetzee, 1999).
- 4.2 The unit's policies must be turned into plans and actions (Coetzee, 1999).
- 4.3 The administrative staff of the unit shall be supported by adequate policies and services (Coetzee, 1999).

Criterion 5: Self evaluation guidelines

- 5.1 Self evaluation determines the implementation of policies and procedures, the extent to which strategic goals are met, quality improvement needs from staff, student, employer and stakeholder surveys, the quality with which stakeholder enquiries are handled, record-keeping and the success of the Total Quality Management drive within the function (Coetzee, 1999).
- 5.2 Top Management should obtain feedback directly on Quality Management System (ISO, 2000a).
- 5.3 There should be stakeholder surveys on quality provision (Coetzee, 1999).

SPECIFIC CRITERIA

Criterion 6: Student Counselling

6.1 Student counsellors must reflect core competencies in the demonstration of their unique role and functions e.g. counsellors' professional responsibility, offering a counselling/therapeutic service, career development, student development service, academic and learning skills development, advocacy and consultation service, training, assessment as part of the admissions process and community outreach.

6.2 counsellors' professional responsibilities include:

- legal understanding of crisis intervention
- knowing ethical standards and
- practising integrity and proper judgement.

6.3 counselling/therapeutic service that:

- provides for personal, career and educational development and promotes wellness
- has qualified personnel
- includes rehabilitative, curative and preventative components
- co-operates with a referral network and with health services
- includes psychometric and psychological tests
- keeps records locked up and confidential and
- has specific measures, policies and procedures for crisis intervention.

6.4 career development service that:

- educates students and prospective students about career opportunities
- trains students for job-hunting and employment

- supports alumni during career transitions and
- provides graduate placement.

6.5 student development service that:

- orientates students through preparation programmes
- empowers students through developmental and preventative workshops e.g. stress management
- provides personal development programmes and leadership that prepares students e.g. community awareness, multicultural and gender and
- provides resources such as leaflets and brochures.

6.6 academic and learning skills development services that focus on:

- identification of impediments to a successful learning environment
- improving learning and study skills
- cognitive skills training
- collaboration with academic faculties
- access courses
- provision of resources such as leaflets, study skills packages, etc.
- assistance to disabled students or other students with specific needs and
- consulting, advising and mediating on behalf of stakeholders.

6.7 advocacy and consultation service that:

- assists students in extenuating circumstances
- campaigns for assistance to disabled students or groups with specific needs and

- consults, advises, and mediates on behalf of stakeholders.

6.8 training of staff and peer helpers

- Contributions towards academic and tutorial staff training
- contributions towards support staff training and
- training to peer helpers.

6.9 assessment as part of the admissions process:

- assessment of prospective students and
- research on admission criteria, assessment techniques and instruments.

6.10 community outreach

- community outreach programmes.

6.11 assist students with transition to university life. (added)

6.12 makes a contribution to university committees. (added)

6.11 and 6.12 are added criteria that comes from the interviews.

Criterion 7: Student development

Student development should provide for leadership development, sports, student political groups, cultural, religious and social societies as well as appropriate forms of communication and support for off-campus students.

In order to meet the criterion, the following are required:

7.1 student development and support that:

- provides orientation to students entering the institution for the first time
- evaluates the services of the orientation programme and
- changes to the orientation programme where necessary.

7.2 leadership development that:

- engages elected leaders of student structures, for example, assisting with the interaction at faculty level and support services
- engages staff in student social development, for example, getting volunteers for leadership programmes and
- makes provision for leadership that caters for a diverse student body (CHE, 2005).

7.3 administrative services which:

- make provision for Student Representative Council (SRC) administration such as correspondence, filing and liaison with institutional departments.

7.4 SRC elections:

- an Independent Election Committee deals with nominations, voter's lists, co-ordinating election officers, inauguration of the new SRC and election reports.

7.5 cultural programme:

- organises artistic talent shows, artistic talent workshops, showcases and local drama productions. This compares with support process aligned with key process in the core process of the Coetzee Model.

7.6 writing centre:

- provision of computers, resources for student use, support with assignments and language support.

7.7 driver education:

- learner's instruction, booking of appointments, driver's instruction and driver's test support.

- 7.8 sports administration:
- facilities management and
 - sports equipment and club administration.

7.9 identify referral sources (e.g. health) (added).

(7.9 identify referral sources is an added criteria coming from the interviews.)

Criterion 8 for Health and Safety

Students and staff should have effective health and safety mechanisms in place such as building safety and health auditing, residence safety and health auditing, safety promotion and communication and waste recycling.

In order to meet the criterion the following are required:

- 8.1 building safety and health auditing which:
- ensures that all facilities including buildings, installations, storage areas, sanitary facilities and technical work areas meet the requirements of relevant laws and regulations.
- 8.2 residence safety and health auditing which:
- ensures that all food preparation, storage and handling procedures are in accordance with health laws, regulations and codes of good practice.
- 8.3 safety promotion and communication which:
- provides training and awareness programmes to staff and students as required by legislation and internal policies.
- 8.4 waste recycling:
- implement an effective waste management system.
- 8.5 laboratory safety and health auditing.

- 8.6 safety and health policy of the institution.
- 8.7 all outside contractors coming onto the campus must comply with relevant health and safety regulation.
- 8.8 management of an effective system to prevent occupational injuries and diseases.
- 8.9 management of an effective compensation system.
- 8.10 regular fire drills (added).
- 8.11 regular servicing of fire extinguishers (added).
- 8.12 orientation to students on general safety e.g. laboratory safety and ventilation extraction (added).

(8.10, 8.11 and 8.12 are added criteria that came from the literature reviews.)

Criterion 9: Student housing

Effective student housing should provide residence admissions control, room allocation, residence supervision, security and access control, catering services, room quality, recreation and development, laundry, cleaning control, admission and induction of foreign students to the residence.

In order to meet the criterion the following are minimum requirements:

9.1 residence admissions control:

- implemented according to a documented procedure.

9.2 room allocation:

- implemented according to a documented procedure.

9.3 residence supervision.

9.4 security and access control:

- fire exit doors should be locked
- formal fire drills and
- alcohol and assault prevention.

9.5 catering services:

- hygiene audits should be done regularly.

9.6 room quality:

- the rooms should be sufficiently furnished.
- there should be sufficient study facilities.

9.7 recreation and development:

- functions are available for recreation.

9.8 laundry:

- adequate laundry facilities and
- maintenance of the machines.

9.9 cleaning control:

- all areas should be regularly cleaned according to specified requirements.

admission and induction of foreign students to the residence:

- there is an induction for foreign students.

9.11 office administration should be available for students when required.

9.12 co-ordination of residence hall activities (added).

9.13 implementing quiet study periods (added).

(9.12 and 9.13 are added criteria that comes from the interviews)

CRITERION 10: Financial Aid (National Student Financial Aid System (NSFAS)

Audit programme, 2004)

10.1 Disseminating information:

- Students should be appropriately informed and there should be evidence of the availability of financial assistance from NSFAS utilising resources.

10.2 Inviting the application:

- There must be adequate evidence that the relevant application forms were readily available to all students and that there was sufficient stock of these forms
- Does the institution use an “all purpose” application form or does the institution use a NSFAS specific application form designed by the institution.

10.3 Testing eligibility:

Firstly, does the institution ensure compliance with the following eligibility criteria:

- Must be a citizen of South Africa
- Must be accepted as a registered student at the institution
- Studying towards a first tertiary qualification
- Studying towards a second educational qualification
- Judged to be able to succeed
- Financially needy
- Unable to finance his/her studies without a NSFAS Award.

Secondly, the potential to succeed:

- Do financial aid officers have access to academic records of the students applying for an award?

- What information is obtainable before the first years of study to determine if the student has the potential to succeed?
- Does the institution ensure that qualifying students are registered for courses that can be completed to certain ratios?

Thirdly, financial need:

- Have procedures for implementing the NSFAS means test by 01 October 2002 been put in place?
- Does the institution have a copy of the means test on file?
- Does the means test identify who the neediest students are? Namely, do financial aid officers have access to the student's fee accounts that are scrutinised to determine any other sources of funding, and do the financial aid officers ensure that family contributions are seen as alternative means of financial contribution?

10.4 Determining the size of the loan:

- Determine the formula used to calculate the size of the loan. Does this formula comply with the NSFAS award formula?
- If all other NSFAS requirements are met, and where the required award is greater than or equal to the maximum award, was the allowed maximum award granted (R17,600.00)?
- In cases where the required loan is less than the minimum permissible loan is no loan granted?
- Did all candidates qualifying for a loan receive awards as long as funds were available?

- Identify cases where loans that exceed the permissible amounts were granted and obtain reasons for such grants .
- Where insufficient funds were available to pay over to needy applicants did the most needy applicants with the highest potential to succeed receive funding first?

10.5 Granting the loan

- Did the institution highlight the interest on the loan to the recipients?
- Was the difference between loan and bursary and the up to 40% rebate component of the loan explained to the student?
- Were students made aware of the contents of the loan agreement form before signing the document?
- Was each page of the loan agreement form signed by the student to accept the correctness and to indicate understanding of its contents?
- Was the validity of the Identity Document numbers checked? NSFAS has made a web page available for this purpose.
- Has a copy of the ID been made and kept on file at the Financial Aid office and at NSFAS?
- Who is responsible for crediting the student's fee account?

CRITERION 11: Human Resources (Coetzee, 1999)

This criterion describes the extent to which human resources processes and practices are successfully managed. These include evidence of implementation of:

- 11.1 a manpower plan, such as an organogram, new posts control and records thereof, job description and job grading
- 11.2 staffing plans, such as integration with strategic and manpower plans, selection and recruitment, appointment of permanent, temporary and contract staff, orientation and probation, salaries and benefits, general conditions of service and leave management;
- 11.3 performance appraisal initiatives, such as objective setting, staff appraisal and career development
- 11.4 staff development initiatives such as staff training and skills development
- 11.5 disciplinary measures
- 11.6 equity and transformation processes
- 11.7 HIV/AIDS awareness
- 11.8 disability handling
- 11.9 sexual harassment policies
- 11.10 implementation of relevant Acts, such as the Labour Relations Act, Higher Education Acts, Basic Conditions of Employment Act, Employment Equity Act, Skills Development
- 11.11 organisational culture management
- 11.12 collective agreement between institutions and unions
- 11.13 study concessions for staff
- 11.14 medical aid provision and
- 11.15 pension fund provision.

CRITERION 12: Marketing (Coetzee, 1999)

This criterion describes the extent to which the marketing practices and processes are being successfully managed. These include evidence of implementation of:

- 12.1 fundraising
- 12.2 marketing services
- 12.3 public relations services
- 12.4 an alumni office
- 12.5 publications control
- 12.6 a corporate identity
- 12.7 media liaison and
- 12.8 institutional public affairs management.

CRITERION 13: Information and Communication Technology (Coetzee, 1999)

This criterion describes the extent to which Information Technology practices and processes are managed. This includes evidence of implementation of:

- 13.1 information Technology Systems, such as configuration control and support of academic programme needs, student based needs, financial system, human resources, fixed assets, campus space, financial aid, co-operative education, alumni systems and registrations
- 13.2 computing facilities management, such as configuration control and change management of Unix and Oracle support, peripheral interfacing to integrated system, computer environment management, printer consumables, printer maintenance and SLIS library management
- 13.3 internet control systems, such as budget control, access control, security and virus control, web intra- and inter-control, network management and bandwidth and availability management
- 13.4 personal computer resources, such as hardware provision, asset control of hardware and software, upgrading control, applications control, resource room access and facilities management and hiring of resources
- 13.5 Local Area Network systems, such as file server provision and management, LAN switching and routing. LAN operations management, back-up support and management and remote access provision and management and
- 13.6 IT support systems, such as security profiles, virus protection, system upgrades, system and data quality assurance, data back-up maintenance systems and a helpdesk.

CRITERION 14: Finance (Coetzee, 1999)

This criterion describes the extent to which finance processes are successfully managed. These include the evidence of implementation of:

- 14.1 funding control
- 14.2 levies control
- 14.3 bursaries control
- 14.4 budgeting control and links to the strategic plan
- 14.5 investment control
- 14.6 debtors and creditors control, including student debtors
- 14.7 income and expenses control
- 14.8 asset control, including fixed and movable assets
- 14.9 purchasing and issue control
- 14.10 salaries and benefits control
- 14.11 cashier control
- 14.12 travel control and
- 14.13 statutory returns control.

CRITERION 15: Technical Services (Coetzee, 1999)

This criterion describes the extent to which technical processes are being successfully managed.

These include evidence of implementation of:

- 15.1 campus planning systems such as layout, signage, furniture and space allocation
- 15.2 capital works control
- 15.3 maintenance work control, including keys production
- 15.4 hiring of facilities
- 15.5 landscaping and gardening services
- 15.6 communication services such as post, telephone, printing and photocopying
- 15.7 transport and
- 15.8 protection services such as protection plans, security codes, access control and parking control.

CRITERION 16: Protection Services (Coetzee, 1999)

This criterion describes the extent to which protection services processes are being successfully managed. This includes evidence of:

- 16.1 the availability of a protection plan.
- 16.2 control of security codes.
- 16.3 access control.
- 16.4 assets control.
- 16.5 parking control.
- 16.6 investigations control and
- 16.7 transport.

CRITERION 17: Registrations (Coetzee, 1999)

This criterion describes the extent to which registration practices and processes are being successfully managed. These include evidence of:

- 17.1 enquiries management
- 17.2 application forms data capturing
- 17.3 printing of student cards
- 17.4 processing of changes in information e.g. addresses
- 17.5 proof of registration
- 17.6 validation of reports
- 17.7 outstanding documents
- 17.8 application statistics
- 17.8 maintainance of student files
- 17.9 registration of students and
- 17.10 budgetary processes.

CRITERION 18: Examinations (Coetzee, 1999)

This criterion describes the extent to which examination and assessment processes are being successfully managed. This includes evidence of:

- 81.1 handling, administration and approval of exemptions, credits and recognition for prior learning
- 18.2 the accreditation, approval and appointment of internal assessors and moderators
- 18.3 the administration of examinations, assignments, projects, research and portfolios
- 18.4 the administration of internal and external moderation processes for examination
- 18.5 completion of assessor and moderator reports
- 18.6 the handling of marks
- 18.7 security needs
- 18.8 handling of failures and the need for remarking and
- 18.9 the handling of administration processes for certification of qualifications.

CRITERION 19: Library (Coetzee, 1999)

This criterion describes the extent to which library processes are being successfully managed. This includes evidence of:

- 19.1 subject librarianship
- 19.2 cataloguing and indexing
- 19.3 inter-library loans
- 19.4 monitoring utilisation of the library and information services such as facilities, reading rooms, noise levels and discussion groups
- 19.5 communication and promotion of the library and information services

- 19.6 management of copyright issues
- 19.7 photocopying services
- 19.8 stock renewal and
- 19.9 library and information services performance indicators such as books and journals per faculty, per programme and per subject.

APPENDIX R: SUPPORT SERVICES EVALUATION QUESTIONNAIRE

(Coetzee, 1999)

Evaluate all the questions separately for each student service.

1. Determine the extent to which a vision and mission statement which aligns with that of the institution has been formulated for support services. Has this been communicated to all concerned?
2. Have clear strategic goals and performance indicators been set and approved for this function by institutional leadership? Do they cater adequately for anticipated future needs?
3. Are the functions adequately resourced and funded in terms of:
 - Available budgets
 - Information systems and technology
 - Suitably qualified and experienced staff
 - Administration control
 - Office space, workstations and facilities
 - Management of functions and
 - Staff development.
4. Are handbooks in place that adequately define policies and procedures for the mechanisms as outlined in the evaluation?
5. To what extent has self-evaluation been conducted to determine:
 - Implementation of policies and procedures
 - The extent to which strategic goals are being effectively and efficiently met
 - Quality improvement needs from staff, student and stakeholder surveys
 - The quality with which staff enquiries are handled
 - The effectiveness and efficiency of record keeping
 - The success of a performance management system within the function
 - The success of the Total Quality Management drive within the function

Evaluate the success of the self-evaluation.

6. Describe the extent to which the support service processes are being successfully managed. These include the evidence of implementation for support processes.

APPENDIX S: DESCRIPTIVE STATISTICS

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--|-----|---------|---------|--------|----------------|
| 1.1 Criterion 1 - Vision and Mission | 195 | 1.00 | 4.00 | 1.4667 | .54929 |
| 1.2 | 199 | 1.00 | 3.00 | 1.5075 | .51118 |
| 1.3 | 197 | 1.00 | 4.00 | 1.5685 | .53607 |
| 1.4 | 196 | 1.00 | 3.00 | 1.5408 | .50977 |
| 1.5 | 199 | 1.00 | 3.00 | 1.5528 | .55594 |
| 1.6 | 196 | 1.00 | 4.00 | 1.6071 | .60235 |
| 2.1 Criterion 2 - Strategic goals and performance indicators | 190 | 1.00 | 4.00 | 1.5368 | .55033 |
| 2.2 | 199 | 1.00 | 3.00 | 1.5477 | .52846 |
| 2.3 | 199 | 1.00 | 3.00 | 1.5226 | .51073 |
| 2.4 | 197 | 1.00 | 3.00 | 1.4975 | .54045 |
| 2.5 | 197 | 1.00 | 3.00 | 1.5127 | .52108 |
| 2.6 | 198 | 1.00 | 2.00 | 1.4899 | .50117 |
| 2.7 | 192 | 1.00 | 3.00 | 1.5521 | .52915 |
| 2.8 | 192 | 1.00 | 3.00 | 1.5313 | .53079 |
| 2.9 | 191 | 1.00 | 3.00 | 1.5550 | .54855 |
| 3.1 Criterion 3 - Resource and funding | 187 | 1.00 | 4.00 | 1.7326 | .69804 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|----------|----------------|----------------|-------------|---------------------------|
| 3.2 | 198 | 1.00 | 4.00 | 1.5808 | .54357 |
| 3.3 | 198 | 1.00 | 3.00 | 1.6313 | .56139 |
| 3.4 | 198 | 1.00 | 3.00 | 1.5556 | .51814 |
| 3.5 | 198 | 1.00 | 3.00 | 1.5707 | .52602 |
| 4.1 Criterion 4 - Policies and procedures | 194 | 1.00 | 4.00 | 1.4227 | .52571 |
| 4.2 | 198 | 1.00 | 3.00 | 1.4040 | .50216 |
| 4.3 | 196 | 1.00 | 2.00 | 1.4337 | .49685 |
| 5.1 Criterion 5 - Self evaluation guidelines | 190 | 1.00 | 4.00 | 1.6421 | .52283 |
| 5.2 | 196 | 1.00 | 3.00 | 1.6224 | .51670 |
| 5.3 | 196 | 1.00 | 4.00 | 1.6378 | .53244 |
| 5.4 | 196 | 1.00 | 3.00 | 1.6122 | .51903 |
| 6.1 Criterion 6 - Student counsellors | 5 | 1.00 | 2.00 | 1.8000 | .44721 |
| 6.2 | 12 | 1.00 | 3.00 | 1.5000 | .67420 |
| 6.3 | 9 | 1.00 | 2.00 | 1.3333 | .50000 |
| 6.4 | 14 | 1.00 | 2.00 | 1.6429 | .49725 |
| 6.5 | 13 | 1.00 | 2.00 | 1.7692 | .43853 |
| 6.6 | 13 | 1.00 | 4.00 | 1.8462 | .80064 |
| 6.7 | 10 | 1.00 | 2.00 | 1.8000 | .42164 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----------|----------------|----------------|-------------|---------------------------|
| 6.8 | 13 | 1.00 | 2.00 | 1.7692 | .43853 |
| 6.9 | 13 | 1.00 | 2.00 | 1.6923 | .48038 |
| 6.10 | 11 | 1.00 | 2.00 | 1.5455 | .52223 |
| 7.1 Criterion 7 - Student development | 13 | 1.00 | 2.00 | 1.3077 | .48038 |
| 7.2 | 13 | 1.00 | 2.00 | 1.3077 | .48038 |
| | N | Minimum | Maximum | Mean | Std. Deviation |
| 7.3 | 12 | 1.00 | 2.00 | 1.5833 | .51493 |
| 7.4 | 13 | 1.00 | 2.00 | 1.3846 | .50637 |
| 7.5 | 12 | 1.00 | 2.00 | 1.5833 | .51493 |
| 7.6 | 13 | 1.00 | 2.00 | 1.6154 | .50637 |
| 7.7 | 13 | 1.00 | 3.00 | 1.4615 | .66023 |
| 7.8 | 11 | 1.00 | 3.00 | 1.7273 | .64667 |
| 7.9 | 10 | 1.00 | 2.00 | 1.7000 | .48305 |
| 8.1 Criterion 8 - Health and safety | 19 | 1.00 | 2.00 | 1.4737 | .51299 |
| 8.2 | 19 | 1.00 | 2.00 | 1.5789 | .50726 |
| 8.3 | 19 | 1.00 | 2.00 | 1.4737 | .51299 |
| 8.4 | 19 | 1.00 | 2.00 | 1.5789 | .50726 |
| 8.5 | 17 | 1.00 | 2.00 | 1.5294 | .51450 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---------------------------------|----------|----------------|----------------|-------------|---------------------------|
| 8.6 | 17 | 1.00 | 2.00 | 1.4118 | .50730 |
| 8.7 | 17 | 1.00 | 2.00 | 1.7647 | .43724 |
| 8.8 | 19 | 1.00 | 2.00 | 1.6842 | .47757 |
| 8.9 | 17 | 1.00 | 2.00 | 1.6471 | .49259 |
| Criterion 9.1 - Student housing | 17 | 1.00 | 2.00 | 1.6471 | .49259 |
| 9.2 | 17 | 1.00 | 2.00 | 1.7647 | .43724 |
| 9.3 | 17 | 1.00 | 2.00 | 1.7059 | .46967 |
| 9.4 | 17 | 1.00 | 2.00 | 1.5294 | .51450 |
| 9.5 | 17 | 1.00 | 2.00 | 1.7059 | .46967 |
| 9.6 | 17 | 1.00 | 2.00 | 1.6471 | .49259 |
| 9.7 | 17 | 1.00 | 2.00 | 1.8235 | .39295 |
| 9.8 | 17 | 1.00 | 2.00 | 1.7059 | .46967 |
| 9.9 | 17 | 1.00 | 2.00 | 1.8235 | .39295 |
| 9.10 | 15 | 1.00 | 2.00 | 1.8000 | .41404 |
| 9.11 | 13 | 1.00 | 2.00 | 1.5385 | .51887 |
| Criterion 10.1 – Fin Aid | 16 | 1.00 | 2.00 | 1.5625 | .51235 |
| 10.2 | 9 | 1.00 | 2.00 | 1.4444 | .52705 |
| 10.2.1 | 6 | 1.00 | 2.00 | 1.6667 | .51640 |
| 10.2.2 | 10 | 1.00 | 2.00 | 1.4000 | .51640 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|----------|----------|----------------|----------------|-------------|---------------------------|
| 10.2.3 | 10 | 1.00 | 2.00 | 1.5000 | .52705 |
| 10.2.4 | 9 | 1.00 | 2.00 | 1.4444 | .52705 |
| 10.2.5 | 8 | 1.00 | 2.00 | 1.3750 | .51755 |
| 10.2.6 | 8 | 1.00 | 3.00 | 1.7500 | .70711 |
| 10.2.7 | 10 | 1.00 | 2.00 | 1.6000 | .51640 |
| 10.3 | 8 | 1.00 | 2.00 | 1.6250 | .51755 |
| 10.3.1 | 8 | 1.00 | 2.00 | 1.6250 | .51755 |
| 10.3.2 | 9 | 1.00 | 2.00 | 1.5556 | .52705 |
| 10.3.3 | 9 | 1.00 | 2.00 | 1.4444 | .52705 |
| 10.3.4.1 | 9 | 1.00 | 2.00 | 1.5556 | .52705 |
| 10.3.4.2 | 9 | 1.00 | 2.00 | 1.5556 | .52705 |
| 10.4.1 | 9 | 1.00 | 2.00 | 1.5556 | .52705 |
| 10.4.2 | 9 | 1.00 | 2.00 | 1.5556 | .52705 |
| 10.4.3 | 9 | 1.00 | 2.00 | 1.5556 | .52705 |
| 10.4.4 | 8 | 1.00 | 2.00 | 1.6250 | .51755 |
| 10.4.5 | 9 | 1.00 | 2.00 | 1.6667 | .50000 |
| 10.5.1 | 8 | 1.00 | 2.00 | 1.6250 | .51755 |
| 10.5.2 | 8 | 1.00 | 2.00 | 1.6250 | .51755 |
| 10.5.3 | 8 | 1.00 | 2.00 | 1.6250 | .51755 |
| 10.5.4 | 6 | 1.00 | 2.00 | 1.8333 | .40825 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------------|----------|----------------|----------------|-------------|---------------------------|
| 10.5.5 | 13 | .00 | .00 | .0000 | .00000 |
| 10.5.6 | 13 | 1.00 | 1.00 | 1.0000 | .00000 |
| 10.5.7 | 13 | 1.00 | 2.00 | 1.5385 | .51887 |
| 11.1 Human resources | 12 | 1.00 | 2.00 | 1.6667 | .49237 |
| 11.2 | 12 | 1.00 | 2.00 | 1.5000 | .52223 |
| 11.3 | 11 | 1.00 | 3.00 | 1.9091 | 1.04447 |
| 11.4 | 12 | 1.00 | 2.00 | 1.2500 | .45227 |
| 11.5 | 12 | 1.00 | 3.00 | 1.2500 | .62158 |
| 11.6 | 12 | 1.00 | 2.00 | 1.5000 | .52223 |
| 11.7 | 12 | 1.00 | 2.00 | 1.5000 | .52223 |
| 11.8 | 11 | 1.00 | 2.00 | 1.0909 | .30151 |
| 11.9 | 12 | 1.00 | 4.00 | 1.6667 | 1.23091 |
| 11.10 | 12 | 1.00 | 3.00 | 1.3333 | .65134 |
| 11.11 | 11 | 1.00 | 4.00 | 2.0000 | 1.26491 |
| 11.12 | 11 | 1.00 | 3.00 | 1.3636 | .67420 |
| 11.13 | 10 | 1.00 | 2.00 | 1.2000 | .42164 |
| 11.14 | 12 | 1.00 | 2.00 | 1.0833 | .28868 |
| 11.15 | 12 | 1.00 | 2.00 | 1.0833 | .28868 |
| 12.1 Marketing | 5 | 1.00 | 2.00 | 1.6000 | .54772 |
| 12.2 | 9 | 1.00 | 2.00 | 1.6667 | .50000 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------|----------|----------------|----------------|-------------|---------------------------|
| 12.3 | 9 | 1.00 | 3.00 | 2.1111 | .60093 |
| 12.4 | 9 | 1.00 | 2.00 | 1.6667 | .50000 |
| 12.5 | 9 | 1.00 | 3.00 | 2.0000 | .70711 |
| 12.6 | 9 | 1.00 | 2.00 | 1.6667 | .50000 |
| 12.7 | 9 | 1.00 | 2.00 | 1.7778 | .44096 |
| 12.8 | 9 | 1.00 | 2.00 | 1.7778 | .44096 |
| 13.1 ICT | 14 | 1.00 | 2.00 | 1.5000 | .51887 |
| 13.2 | 14 | 1.00 | 2.00 | 1.4286 | .51355 |
| 13.3 | 14 | 1.00 | 2.00 | 1.2143 | .42582 |
| 13.4 | 14 | 1.00 | 2.00 | 1.2143 | .42582 |
| 13.5 | 14 | 1.00 | 2.00 | 1.2857 | .46881 |
| 13.6 | 14 | 1.00 | 2.00 | 1.1429 | .36314 |
| 14.1 Finance | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.2 | 3 | 1.00 | 2.00 | 1.6667 | .57735 |
| 14.3 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.4 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.5 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.6 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.7 | 4 | 1.00 | 2.00 | 1.7500 | .50000 |
| 14.8 | 4 | 1.00 | 2.00 | 1.7500 | .50000 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|-------------------------|----------|----------------|----------------|-------------|---------------------------|
| 14.9 | 4 | 1.00 | 2.00 | 1.7500 | .50000 |
| 14.10 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.11 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.12 | 4 | 1.00 | 2.00 | 1.5000 | .57735 |
| 14.13 | 4 | 1.00 | 2.00 | 1.7500 | .50000 |
| 15.1 Technical services | 11 | 1.00 | 3.00 | 1.6364 | .80904 |
| 15.2 | 11 | 1.00 | 2.00 | 1.3636 | .50452 |
| 15.3 | 11 | 1.00 | 2.00 | 1.2727 | .46710 |
| 15.4 | 9 | 1.00 | 2.00 | 1.4444 | .52705 |
| 15.5 | 11 | 1.00 | 2.00 | 1.4545 | .52223 |
| 15.6 | 11 | 1.00 | 3.00 | 1.6364 | .67420 |
| 15.7 | 10 | 1.00 | 3.00 | 1.6000 | .69921 |
| 15.8 | 11 | 1.00 | 2.00 | 1.6364 | .50452 |
| 16.1 Protection service | 16 | 1.00 | 2.00 | 1.5000 | .51640 |
| 16.2 | 17 | 1.00 | 3.00 | 1.5882 | .61835 |
| 16.3 | 17 | 1.00 | 3.00 | 1.5882 | .61835 |
| 16.4 | 17 | 1.00 | 3.00 | 1.4706 | .62426 |
| 16.5 | 17 | 1.00 | 2.00 | 1.4118 | .50730 |
| 16.6 | 17 | 1.00 | 2.00 | 1.4118 | .50730 |
| 16.7 | 16 | 1.00 | 2.00 | 1.4375 | .51235 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----------|----------------|----------------|-------------|---------------------------|
| 17.1 Registrations | 12 | 1.00 | 2.00 | 1.7500 | .45227 |
| 17.2 | 12 | 1.00 | 3.00 | 1.8333 | .57735 |
| 17.3 | 12 | 1.00 | 2.00 | 1.7500 | .45227 |
| 17.4 | 11 | 1.00 | 2.00 | 1.7273 | .46710 |
| 17.5 | 12 | 1.00 | 2.00 | 1.8333 | .38925 |
| 17.6 | 11 | 1.00 | 2.00 | 1.9091 | .30151 |
| 17.7 | 12 | 1.00 | 2.00 | 1.9167 | .28868 |
| 17.8 | 12 | 1.00 | 2.00 | 1.8333 | .38925 |
| 17.9 | 11 | 1.00 | 2.00 | 1.7273 | .46710 |
| 17.10 | 12 | 2.00 | 2.00 | 2.0000 | .00000 |
| 17.11 | 11 | 1.00 | 2.00 | 1.6364 | .50452 |
| 18.1 Examinations | 15 | 1.00 | 3.00 | 2.0000 | .65465 |
| 18.2 | 18 | 1.00 | 3.00 | 1.9444 | .63914 |
| 18.3 | 17 | 1.00 | 3.00 | 2.0588 | .65865 |
| 18.4 | 18 | 1.00 | 3.00 | 1.8889 | .47140 |
| 18.5 | 18 | 1.00 | 3.00 | 2.0556 | .53930 |
| 18.6 | 17 | 1.00 | 3.00 | 1.8235 | .52859 |
| 18.7 | 18 | 1.00 | 2.00 | 1.5000 | .51450 |
| 18.8 | 17 | 1.00 | 3.00 | 1.7059 | .58787 |
| 18.9 | 18 | 1.00 | 3.00 | 2.0000 | .68599 |

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------|----------|----------------|----------------|-------------|---------------------------|
| 19.1 Library | 15 | 1.00 | 2.00 | 1.6000 | .50709 |
| 19.2 | 15 | 1.00 | 3.00 | 1.6000 | .63246 |
| 19.3 | 15 | 1.00 | 2.00 | 1.4667 | .51640 |
| 19.4 | 14 | 1.00 | 3.00 | 1.6429 | .63332 |
| 19.5 | 15 | 1.00 | 2.00 | 1.4000 | .50709 |
| 19.6 | 14 | 1.00 | 2.00 | 1.4286 | .51355 |
| 19.7 | 15 | 1.00 | 2.00 | 1.6000 | .50709 |
| 19.8 | 15 | 1.00 | 2.00 | 1.4667 | .51640 |
| 19.9 | 15 | 1.00 | 3.00 | 1.6667 | .61721 |

APPENDIX T: LIST OF HIGHER EDUCATION INSTITUTIONS THAT PARTICIPATED IN THE STUDY

1. University of Cape Town (UCT)
2. Central University of Technology (CUT)
3. Cape Peninsula University of Technology (CPUT)
4. Durban University of Technology (DUT)
5. University of Fort Hare (UFH)
6. University of the Free State (UFS)
7. University of Johannesburg (UJ)
8. University of Kwazulu Natal (UKZN)
9. University of Limpopo (UL)
10. Mangosothuto Technikon (MT)
11. Nelson Mandela Metropole University (NMMU)
12. North West University (NWU)
13. University of Pretoria (UP)
14. Rhodes University (UR)
15. University of Stellenbosch (US)
16. Tshwane University of Technology (TUT)
17. University of South Africa (UNISA)
18. Vaal University of Technology (VUT)
19. University of Venda (UV)
20. Walter Sisulu University (WSU)

21. University of the Western Cape (UWC)
22. University of the Witwatersrand (WITS)
23. University of Zululand (UZ)

APPENDIX U: OVERALL RESEARCH PLAN AND DESIGN

- Anticipating the expectations of senior staff within support units of the number and type of criteria required to evaluate such units.
- The identification of five generic criteria making up the domain and environment evaluation of the support evaluation construct.
- The generation of 27 items representing the generic criteria.
- The identification of 14 specific criteria, each relevant to one of the 14 types of support units and their processes that was chosen by quota sampling for this study.
- The collection of generic expectations data from a sample of 345 respondents, each of whom was a Head of a chosen support function. In a similar manner, data was collected from about four to 19 respondents of specific criteria for a chosen unit.
- Scale Purification through an iterative sequence.
- Assessment of the validity and reliability of the 27 items representing the five generic criteria.

For the 4 to 19 specific responses for each of the 15 chosen support units: Computation of the mean and standard deviation for each of the items.

APPENDIX V: SUPPORT UNITS THAT WERE SELECTED FOR THE STUDY

- Quality Assurance (QA) - generic criteria only.
- Student Counselling (SC)
- Student development (SD)
- Health and Safety (HS)
- Student Housing (SH)
- Financial Aid (FA)
- Human Resources (HR)
- Marketing and public relations (MKT)
- Information Communication and Technology (ICT)
- Finance (FIN)
- Technical Support (TS)
- Protection Services (PROT)
- Administration of registration of students (REG)
- Examination Administration (EXAM)
- Library (LIBR)

APPENDIX W: LIST OF RESPONDENTS TO QUESTIONAIRES

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|--------|---|------------|----------|-------------|-------------|----------------|
| 1 | University of Cape Town | February | Colette | Quality | 021 6509111 | e-mail |
| 2 | University of Stellenbosch | Adams | Junay | Quality | 021 8089111 | hand delivered |
| 3 | Nelson Mandela Metropolitan University | Oosthuizen | Martin | Quality | 041 5042111 | e-mail |
| 4 | Rhodes University | Mzamane | Buyisiwe | Quality | 046 6223659 | e-mail |
| 5 | UNISA | Brink | Johan | Quality | 012 4296271 | hand delivered |
| 6 | University of Witwatersrand | Bhagwandas | Kamal | Quality | 012 7174065 | hand delivered |
| 7 | University of Zululand | Sutherland | Lee | Quality | 035 9026000 | hand delivered |
| 8 | Walter Sisulu University | Madoda | M | Quality | | hand delivered |
| 9 | Durban Institute of Technology | Sataar | Bella | Quality | 031 2042111 | telephone |
| 10 | University of Western Cape | Morta | Vincent | Quality | 021 9592139 | hand delivered |
| 11 | University of Cape Town | Short | Anne | Counselling | 021 6502496 | hand delivered |
| 12 | University of Stellenbosch | Cilliers | Charl | Counselling | 021 8084971 | hand delivered |
| 13 | University of Western Cape | Suffla | Shanaaz | Counselling | 021 9593587 | hand delivered |
| 14 | Cape Peninsula University of Technology | Smith | Elsabe | Counselling | 021 4603911 | hand delivered |
| 15 | University of Kwa-Zulu Natal | Sutherland | Maya | Counselling | 031 2607111 | e-mail |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|---------------|---|----------------|--------------|-----------------|------------------|----------------|
| 16 | University of Free State | Herbst | Petro | Counselling | 051 4019111 | e-mail |
| 17 | University of Fort Hare | Majola | Nontsikelelo | Counselling | 040 6022011 | e-mail |
| 18 | Nelson Mandela Metropolitan University | Smith | Darryl | Counselling | 041 5043306 | e-mail |
| 19 | University of Johannesburg | Mkhatshwa | | Counselling | 011 4062416 | telephone |
| 20 | UNISA | Barnard | Sonia | Counselling | 021 9364130 | telephone |
| 21 | Central University of Technology | Cronje | Gert | Counselling | 051 5073199 | fax |
| 22 | Durban Institute of Technology | Singh | Amar | Counselling | 031 2042153 | telephone |
| 23 | University of Cape Town | Salasa | Tasneem | Financial aid | 021 6509111 | hand-delivered |
| 24 | University of Western Cape | Bell | Rensche | Financial aid | 021 9593266 | e-mail |
| 25 | Cape Peninsula University of Technology | v d Westhuizen | Chris | Financial aid | 021 4603911 | hand delivered |
| 26 | University of Stellenbosch | Hanekom | A | Financial aid | 021 8084626 | hand delivered |
| 27 | University of Kwa-Zulu Natal | Ngomane | J | Financial aid | 031 2607111 | telephone |
| 28 | University of Pretoria | Goosen | Jeanne | Financial aid | 012 4204111 | e-mail |
| 29 | Tshwane University of Technology | De Villiers | Roekus | Financial aid | 012 3184116 | e-mail |
| 30 | University of Johannesburg | Cotty | Ina | Financial aid | 011 4062192 | telephone |
| 31 | University of Fort Hare | Koni | L | Financial aid | 040 602259 | fax |
| 32 | University of Limpopo | Herman | Karen | Financial aid | | e-mail |
| 33 | Central University of Technology | Kubheka | Zinclair | Financial aid | 051 5073911 | telephone |
| 34 | Tshwane University of Technology | Motsepe | Onicca | Financial aid | 012 3184116 | telephone |
| 35 | Durban Institute of Technology | Nceng | Sbu | Financial aid | 031 2042111 | telephone |
| 36 | University of Cape Town | Willis | G | Student housing | 021 6509111 | hand delivered |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|---------------|---|----------------|-------------|---------------------|------------------|----------------|
| 37 | University of Stellenbosch | Malan | Dawie | Student housing | 021 8084864 | hand delivered |
| 38 | University of Western Cape | Martin | Peter | Student housing | 021 9592999 | hand delivered |
| 39 | Cape Peninsula University of Technology | Hlalukana | L | Student housing | 021 4603870 | fax |
| 40 | University of Free State | Knoetze | Esta | Student housing | 051 4019111 | e-mail |
| 41 | University of Fort Hare | Hershula | | Student housing | 040 6022011 | telephone |
| 42 | Rhodes University | L'Ange | Iain | Student development | 046 6038188 | telephone |
| 43 | University of Kwa-Zulu Natal | Wills | | Student housing | 031 2607111 | telephone |
| 44 | Durban Institute of Technology | Nhassengo | Doc | Student housing | 031 2042111 | telephone |
| 45 | University of Pretoria | Zielie | Margo | Student housing | 012 4205099 | telephone |
| 46 | Tshwane University of Technology | Buys | Judy | Student housing | 012 3185992 | telephone |
| 47 | University of Fort Hare | Mhaga | J | Student development | 040 6022007 | telephone |
| 48 | University of Cape Town | Goliath | Edwina | Student development | 021 6503924 | hand delivered |
| 49 | University of Stellenbosch | Cilliers | | Student development | 021 8089111 | hand delivered |
| 50 | University of Western Cape | Middleton | Winston | Student development | 021 9592227 | hand delivered |
| 51 | Cape Peninsula University of Technology | v d Louw | P | Student development | 021 4603149 | fax |
| 52 | Nelson Mandela Metropolitan University | Minnie | Robin | Student development | 041 5043868 | telephone |
| 53 | University of Fort Hare | Morrison | L | Student development | 040 6022007 | telephone |
| 54 | University of Johannesburg | Mgolombane | P | Student development | 011 4892911 | telephone |
| 55 | Rhodes University | L'Ange | | Student development | 046 6038138 | telephone |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|---------------|---|----------------|-------------|---------------------|------------------|----------------|
| 56 | Tshwane University of Technology | Snyman | Pieter | Student development | 012 3185924 | e-mail |
| 57 | Durban Institute of Technology | Sedumedi | | Student development | 031 2042682 | telephone |
| 58 | University of Kwa-Zulu Natal | Naidoo | Ravi | Student development | 031 2602443 | telephone |
| 59 | University of Cape Town | Langley | Michael | Health and Safety | 021 6503552 | telephone |
| 60 | University of Stellenbosch | van Deventer | Piet | Health and Safety | 021 8084657 | telephone |
| 61 | University of Western Cape | Arendse | Geoffrey | Health and Safety | 021 959911 | telephone |
| 62 | Cape Peninsula University of Technology | Hendricks | Curt | Health and Safety | 021 4603695 | telephone |
| 63 | University of Pretoria | Fouche | Frans | Health and Safety | 012 3625190 | telephone |
| 64 | University of Fort Hare | Pondy | | Health and Safety | 040 6022446 | telephone |
| 65 | University of Free State | Hansen | Ivan | Health and Safety | 051 4012579 | telephone |
| 66 | University of Witwatersrand | Aslett | Chris | Health and Safety | 011 7179035 | telephone |
| 67 | Central University of Technology | Bester | Hennie | Health and Safety | 051 5073911 | telephone |
| 68 | Durban Institute of Technology | Mbanjwa | Sam | Health and Safety | 031 2042783 | telephone |
| 69 | University of Kwa-Zulu Natal | Dougal | Nolene | Health and Safety | 031 260111 | telephone |
| 70 | University of Western Cape | Mercuur | Karlene | Human resources | 021 9592599 | e- mail |
| 71 | Tshwane University of Technology | Redelinghuys | Karen | Human resources | 012 3185906 | telephone |
| 72 | University of Cape Town | Du Toit | Judith | Human resources | 021 6505685 | telephone |
| 73 | University of Witwatersrand | Taylor | Gary | Human resources | 011 7171401 | e-mail |
| 74 | University of Zululand | | | Human resources | 035 9026000 | fax |
| 75 | Cape Peninsula University of Technology | van Oordt | Nic | Human resources | 021 9591111 | hand delivered |
| 76 | Cape Peninsula University of Technology | Stofile | Pazuma | Human resources | 021 4603920 | e-mail |
| 77 | Mangosuthu Technikon | Subrayan | Vis | Marketing | 031 9077111 | e-mail |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|---------------|---|----------------|-------------|------------------------|------------------|----------------|
| 78 | University of Free State | van Rooyen | Ivan | Marketing | 051 4019111 | e-mail |
| 79 | Cape Peninsula University of Technology | Abrahams | Yusuf | Marketing | 021 9596209 | hand delivered |
| 80 | University of Johannesburg | Stead | Jonathan | Marketing | 011 4062126 | e-mail |
| 81 | Central University of Technology | Naude | F | Marketing | 051 5073820 | telephone |
| 82 | University of South Africa | Ferre | M | Marketing | 012 429111 | e-mail |
| 83 | Vaal University of Technology | Ramasodi | | Information technology | 016 9509112 | telephone |
| 84 | Cape Peninsula University of Technology | Tennant | Paul | Information technology | 021 9596407 | hand delivered |
| 85 | University of Limpopo | Rahimi | Farvar | Information technology | 051 2682449 | telephone |
| 86 | Tshwane University of Technology | Niezen | Jan | Information technology | 012 3185656 | telephone |
| 87 | Nelson Mandela Metropolitan University | Nel | Chris | Information technology | 041 5042318 | telephone |
| 88 | University of Zululand | Kannem | Yvette | Information technology | 035 9026802 | telephone |
| 89 | University of Pretoria | Venter | Hennie | Information technology | 012 4202985 | telephone |
| 90 | Mangosuthu Technikon | Sipho | | Information technology | 031 9077349 | telephone |
| 91 | University of the Western Cape | Nathan | Antha | Information technology | 021 9592157 | telephone |
| 92 | University of Free State | Kotze | | Information technology | 051 5073010 | telephone |
| 93 | Rhodes University | Jacot | F | Information technology | 046 6038279 | telephone |
| 94 | North West University | Jooste | Helei | Information | 016 9103261 | fax |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|--------|---|--------------|---------|------------------------|--------------|-----------|
| | | | | technology | | |
| 95 | Durban Institute of Technology | Singh | V | Information technology | 031 3085206 | telephone |
| 96 | University of Kwa-Zulu Natal | Lubbe | | Information technology | 031 2607111 | telephone |
| 97 | Mangosuthu Technikon | van der Mish | | Finance | 031 9077354 | telephone |
| 98 | University of Kwa-Zulu Natal | Ramkisson | Hiraman | Finance | 031 2608071 | e-mail |
| 99 | Nelson Mandela Metropolitan University | Wasserman | Johan | Finance | 041 5043215 | telephone |
| 100 | University of Fort Hare | Ramoo | | Finance | 040 6022155 | telephone |
| 101 | University of Free State | Deysel | Ria | Technical services | 051 4012132 | telephone |
| 102 | Durban Institute of Technology | Govender | Basil | Technical services | 031 2042111 | telephone |
| 103 | University of Zululand | Smythe | Mike | Technical services | 035 9026535 | telephone |
| 104 | University of Venda | Manenzhe | T | Technical services | 015 9628103 | telephone |
| 105 | Walter Sisulu University | Nemutandana | Albert | Technical services | 043 7085200 | telephone |
| 106 | North West University | Schutte | Jan | Technical services | 018 2992732 | telephone |
| 107 | University of the Western Cape | Achilles | Cedric | Technical services | 021 9593383 | telephone |
| 108 | University of Witwatersrand | Prinsloo | | Technical services | 011 7179016 | telephone |
| 109 | Rhodes University | Hattingh | | Technical services | 046 6038111 | telephone |
| 110 | Mangosuthu Technikon | Marais | Mike | Technical services | 031 9077301 | telephone |
| 111 | Nelson Mandela Metropolitan University | Blignaut | Stuart | Technical services | 041 5043247 | e-mail |
| 112 | Vaal University of Technology | Booyesen | Chris | Technical services | 016 9509255 | telephone |
| 113 | Cape Peninsula University of Technology | Kensley | Desmond | Technical services | 021 9596247 | telephone |
| 114 | University of Pretoria | Moketedi | Dennis | Technical services | 012 420 2155 | telephone |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
|---------------|---|----------------|-------------|---------------------|------------------|-----------|
| 115 | Tshwane University of Technology | Mithibe | Humphrey | Technical services | 012 3184503 | telephone |
| 116 | Stellenbosch University | Swart | Francois | Technical services | 021 8084834 | telephone |
| 117 | Rhodes University | Carstens | Dave | Protection services | 046 6038146 | telephone |
| 118 | University of Free State | Marapo | | Protection services | 051 4013369 | telephone |
| 119 | University of Free State | Frankim | Willie | Protection services | 051 4013438 | telephone |
| 120 | Cape Peninsula University of Technology | Howard | Bob | Protection services | 021 4603408 | telephone |
| 121 | Stellenbosch University | van der Venter | | Protection services | 012 8084657 | telephone |
| 122 | Durban Institute of Technology | Schaick | Faizel | Protection services | 033 8458806 | telephone |
| 123 | University of Kwa-Zulu Natal | Rajmora | Derek | Protection services | 031 2608092 | telephone |
| 124 | University of the Western Cape | Sam | Frank | Protection services | 012 0502239 | telephone |
| 125 | University of Pretoria | Msume | R | Protection services | 012 4202310 | telephone |
| 126 | Tshwane University of Technology | Joubert | Nick | Protection services | 012 3186387 | telephone |
| 127 | University of Johannesburg | Botha | Theo | Protection services | 011 4892000 | telephone |
| 128 | Central University of Technology | van Aswegan | | Protection services | 051 5073177 | telephone |
| 129 | University of Limpopo | Ragoma | Alfred | Protection services | 015 2682498 | telephone |
| 130 | Mangosuthu Technikon | Smith | Gerard | Protection services | 082 3199188 | telephone |
| 131 | University of Zululand | Ntuli | | Protection services | 035 9026593 | telephone |
| 132 | University of Fort Hare | Summerton | Ian | Protection services | 040 6022243 | telephone |
| 133 | Vaal University of Technology | Refilwe | | Protection services | 016 9509936 | fax |
| 134 | University of Witwatersrand | Swemmer | D | Registrations | 011 7171000 | telephone |
| 135 | University of Venda | Humphrey | | Registrations | 015 9628000 | telephone |
| 136 | Stellenbosch University | Fourie | N | Registrations | 021 8089111 | telephone |
| 137 | Vaal University of Technology | Mazibuko | Lindi | Registrations | 016 9509000 | telephone |

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| 138 | University of Pretoria | van Zyl | | Registrations | 012 4204111 | telephone |
| 139 | University of Johannesburg | Nomatemba | Molosi | Registrations | 011 4062551 | telephone |
| 140 | Nelson Mandela Metropolitan University | Vermeulen | | Registrations | 044 8742801 | telephone |
| 141 | Mangosuthu Technikon | Naidoo | S | Registrations | 031 9077125 | telephone |
| 142 | University of Limpopo | Mafara | Priscilla | Registrations | 015 2689111 | telephone |
| 143 | University of Kwa-Zulu Natal | Panday | | Registrations | 031 2067111 | telephone |
| 144 | University of Free State | Joubert | | Registrations | 051 4019111 | telephone |
| 145 | University of Fort Hare | Ntzima | | Registrations | 040 6022011 | telephone |
| 146 | Durban Institute of Technology | Pillay | | Registrations | 031 2042026 | telephone |
| 147 | Central University of Technology | De Swart | | Registrations | 051 5073911 | telephoned |
| 148 | University of Limpopo | Makumbilo | | Examinations | 051 2682226 | telephoned |
| 149 | Unkown sample | | | Examinations | | fax |
| 150 | Nelson Mandela Metropolitan University | Dorothy | Jonathan | Examinations | 041 5042111 | telephoned |
| 151 | University of the Witwatersrand | Registrar | | Examinations | 011 7171200 | telephoned |
| 152 | University of South Africa | Le Roux | | Examinations | 012 429111 | telephoned |
| 153 | University of Venda | Mulaudzi | | Examinations | 015 9628000 | telephoned |
| 154 | University of Kwa-Zulu Natal | Ransewak | Pradeep | Examinations | 031 2607212 | telephoned |
| 155 | University of Cape Town | Abrahams | Michele | Examinations | 021 6503694 | telephoned |
| 156 | Vaal University of Technology | Viljoen | | Examinations | 016 9509000 | telephoned |
| 157 | University of Pretoria | Karstens | | Examinations | 012 4202721 | telephoned |
| 158 | Central University of Technology | van Rooyen | Annemarie | Examinations | 051 5073911 | telephoned |
| 159 | Rhodes University | Fourie | S | Examinations | 046 6038111 | telephoned |
| 160 | Nelson Mandela Metropolitan | Hustler | Cynthia | Examinations | 041 5043107 | telephoned |

| NUMBER | INSTITUTION | SURNAME | NAME | UNIT | TELEPHONE | |
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| | University | | | | | |
| 161 | University of Free State | Spammer | | Examinations | 051 4013449 | telephoned |
| 162 | Stellenbosch University | Fourie | Neels | Examinations | 021 8084830 | telephoned |
| 163 | Walter Sisulu University | Matiwane | | Examinations | 047 5022910 | telephoned |
| 164 | University of Zululand | Vezi | | Examinations | 035 9026284 | telephoned |
| 165 | Tshwane University of Technology | van Wyk | | Examinations | 012 3185152 | telephoned |
| 166 | Cape Peninsula University of Technology | de Wee | George | Examinations | 021 9596229 | hand delivered |
| 167 | Tshwane University of Technology | Swanepoel | Adriaan | Library | 012 3185480 | e-mail |
| 168 | Mangosuthu Technikon | Msimango | Hoekie | Library | 031 9077111 | e-mail |
| 169 | Stellenbosch University | Swart | Henriette | Library | 021 8089111 | e-mail |
| 170 | Nelson Mandela Metropolitan University | Fokker | | Library | 041 5042057 | telephoned |
| 171 | Durban Institute of Technology | Spershott | Claire | Library | 033 845884 | telephoned |
| 172 | University of Limpopo | Matshire | | Library | 015 2682450 | telephoned |
| 173 | University of Free State | Du Preez | | Library | 051 4013469 | telephoned |
| 174 | University of Fort Hare | Oosthuizen | S | Library | 040 6531554 | telephoned |
| 175 | Cape Peninsula University of Technology | Davids | Marion | Library | 021 460 3409 | telephoned |
| 176 | University of Witwatersrand | Walker | Clare | Library | 011 7171952 | telephoned |
| 177 | Vaal University of Technology | Joyce | | Library | 016 9509000 | telephoned |
| 178 | University of the Western Cape | Knoll | V | Library | 021 9592932 | telephoned |
| 179 | Rhodes University | van der Riet | S | Library | 046 6038111 | telephoned |
| 180 | University of Zululand | Locholl | A | Library | 035 9026458 | telephoned |
| 181 | University of Pretoria | Motale | Maggie | Library | 012 4205375 | telephoned |

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| 182 | University of Johannesburg | Sehunelo | | Health & Safety | 011 9335500 | telephoned |
| 183 | Walter Sisulu University | Mbuyiselo | Douglas | Health & Safety | 043 7085241 | telephoned |
| 184 | Vaal University of Technology | Ramokzopa | | Health & Safety | 016 9509316 | telephoned |
| 185 | Tshwane University of Technology | Christie | Mahlangu | Health & Safety | 012 7999000 | telephoned |
| 186 | Nelson Mandela Metropolitan University | Kok | | Health & Safety | 044 8742801 | telephoned |
| 187 | University of Kwa-Zulu Natal | Govender | | Health & Safety | 031 2608101 | telephoned |
| 188 | University of Johannesburg | Kruger | | Student Housing | 011 4892911 | telephoned |
| 189 | Vaal University of Technology | Ncgobo | | Student Housing | 016 9509829 | telephoned |
| 190 | Mangosuthu Technikon | Zondi | | Student Housing | 0836622690 | telephoned |
| 191 | University of North West | Gentle | Karel | Student Housing | 018 2991118 | telephoned |
| 192 | Vaal University of Technology | Madzhie | | Student Housing | 015 9628000 | telephoned |
| 193 | University of Venda | Nnzeru | | Student Housing | 015 9628028 | telephoned |
| 194 | University of Zululand | Nxumalo | | Student Housing | 035 9026693 | telephoned |
| 195 | Rhodes University | Jackson | Ruth | Student Housing | 046 6038111 | telephoned |
| 196 | University of Johannesburg | Britz | Almarie | Financial aid | 011 4892111 | telephoned |
| 197 | University of Zululand | Mthiyane | | Financial aid | 035 9026000 | telephoned |
| 198 | Rhodes University | Bheyile | Leanda | Financial aid | 046 6038111 | telephoned |
| 199 | Vaal University of Technology | Botsane | | Financial aid | 016 9509000 | telephoned |