1.1 INTRODUCTION

This study derives from one of the guiding principles of South Africa's Higher Education Quality Council (HEQC), a permanent sub-committee of the Council on Higher Education (CHE). The principle is that the primary responsibility for quality and quality management rests with higher education institutions themselves. Institutions should seek, according to the HEQC, to establish and sustain effective internal quality management systems that enhance quality and yield reliable information for internal quality-related planning, external audit and public reporting (CHE, 2004b:5).

The HEQC's audit area 1 evaluates in two sub-areas the following:

Criterion 1: The fitness of purpose of the mission of the institution in response to the local, national and international context (including transformation issues).

Criterion 2: Links between planning, resource allocation and quality management (CHE, 2004b:6).

This criterion implies the dovetailing or, according to Smout and Stephenson (2001), "the marriage" of two quality management concepts namely institutional quality management and planning. The current discourse on national level amongst quality assurance managers, institutional planners and senior management of institutions of higher learning is focused on the integration of institutional planning, quality management and resource allocation dimensions of institutional operations as set out in area 1 (criteria 1 and 2) of the scope of the institutional criteria (CHE, 2004b:12). These dimensions are seen as essential foundational elements for achieving the quality objectives of Area 2 (CHE, 2004b:12). Area 1 covers the mission statement of an institution under evaluation and how it links with its planning, resource allocation and quality management. Area 2 deals with the core business of an institution of higher learning i.e. teaching and learning, research and community engagement (CHE, 2004b:3).
The issue of integrating quality management and planning in higher education was emphasised by the National Quality Assurance Forum in 2002 (SAUVCA, 2002:22) which necessitates the establishment of appropriate institutional management structures for this purpose. Following the above-mentioned National Quality Assurance Forum meeting, a workshop was held for quality managers and institutional planners by Higher Education South Africa (HESA) and the HEQC at Zebra Lodge in June 2005. The main theme of the workshop was to discuss the notion of the integration of quality management and planning in higher education. The majority of presentations and responses of quality managers and institutional planners at the workshop gave the impression that the integration of planning and quality management is, in general, an unclear phenomenon at the majority of institutions of higher learning in South Africa. After the perusal of this research proposal in August 2007, the Director responsible for Institutional Audits of the HEQC, Dr Mark Hay (Hay, 2007), emphasised in his response to it that the general tendency of institutions of higher learning in South Africa is for them to fail to fully integrate quality management with planning and resource allocation.

The HEQC audited a University of Technology (U1) in South Africa between 14 and 19 May 2006. The outcome of the audit emphasises the above-mentioned failure of the U1 to integrate planning, resource allocation and quality management. The audit report refers to a need for a planning framework that will ensure the integration of quality management with planning and resource allocation at the U1. The following recommendation in this regard was made by the HEQC (CHE, 2007:13):

"The HEQC recommends that "U1" (the name of the respective university) develop a planning framework which includes the capacity to translate goals into sustainable strategies, the documentation and communication of decisions, and a systematic collection of information for decision-making and monitoring, supported by an integrated and working MIS (Management Information System), which includes resource allocation for the main campus and satellites. Such a planning framework should also identify performance indicators, as well as responsibility for implementation and lines of reporting."

The Report (CHE, 2007:13) refers to the following gaps in the institution's quality management system:

- It is unclear how resource allocation enables Faculties to achieve the institution's vision of becoming a leader in technology (link between the vision and mission and resource allocation).
The institution should develop a quality assurance system that provide sustainable structures and information that can be aggregated in order to develop quality improvement plans and monitor their implementation (outcome of quality assurance exercises that feed into plans, as well as the monitoring of the implementation of the remedial action plans).

The researcher is a quality assurance manager at U1. The researcher wishes to develop a quality management model which integrates the key elements of effective management, namely quality management, planning and resource allocation that is suitable for U1. Although the study is contextualised for specifically the U1, the quality management model will be relevant for implementation by other public universities in South Africa that fail to integrate quality management, planning and resource allocation. Public universities in South Africa are “government funded” institutions. Public institutions of higher learning are therefore accountable to government and other stakeholders (internal and external customers) as the receivers of scarce resources and to ensure quality by means of the implementation of effective quality management systems. The stakeholders of higher education require reassurance that they will receive “value for money”.

1.2 LITERATURE REVIEW

The majority of universities in South Africa have established centralised quality assurance systems within the new dispensation of higher education. On national level, quality managers have been appointed and quality offices have been established in order to facilitate all quality-related activities and issues. The U1 established a quality assurance office and developed a quality assurance system based on the principles of total quality management (TQM), focusing on continuous improvement. The quality assurance system of this institution consists of internal self-evaluation exercises followed by external peer reviews.

1.2.1 POINT OF DEPARTURE

The HEQC institutional criteria document, with reference to the institutional management component indicated as Area 1 (CHE, 2004b:5), stated clearly that the success of quality management at institutions of higher learning to a large extent will be determined by the degree of integration of planning and quality mechanisms. Area 1 of the institutional criteria document also largely ignited the current national discourse on the integration of quality management and planning in higher education. This issue was already emphasised by
members of the National Quality Assurance Forum which was held in 2002 (SAUVCA, 2002:22). It was later incorporated in the institutional criteria document (CHE, 2004b) and debated during the HESA/HEQC workshop of 2005.

During the 2002 forum, it was emphasised that institutions should establish appropriate institutional management structures for this purpose. The majority of universities in South Africa failed in this regard. This "inability" is a national tendency and concurs with the remarks of the HEQC Director Institutional Audits, Dr Mark Hay, during a telephonic interview with the researcher. As already mentioned, the U1's approach to quality assurance is a typical TQM point of view which is customer-focused with the notion of continuous improvement (Oakland, 1998). The adoption of a TQM approach is not an unfamiliar practice at schools and universities (Barret, 2007:1). This concurs with Oakland's (1998:31) view of TQM, that "...it is useful in all types of organisations".

The researcher is of the opinion that the quality assurance system of the U1 lacks the fundamental principles of the TQM philosophy of quality management. This contributes to the need of an integrated approach towards quality management, planning and resource allocation. According to Oakland (1998), the following principles are imperative and characteristic of an effective quality management system:

- It is a comprehensive approach towards improving effectiveness through planning and participation of members on all levels of an organisation.
- Quality management starts at the top, where serious commitment to quality is demonstrated.
- Every member of top management should accept the responsibility for commitment to quality with reference to the organisation of quality, the ability to supply materials and services and the review of management systems for continuous improvement (Oakland, 1998:32).
- TQM is concerned with moving the focus of control from the outside to the inside where every individual is accountable for his or her own performance.
- Effective leadership starts with top management (vision, mission and strategies for implementation).
- TQM is "customer-focused".

An important aspect of TQM management that is relevant for this study is the concept organisational structures. Organisations such as universities are "designed by function"
(Rao, Carr, Dambolena, Kopp, Martin, Rafii & Schlesinger, 1996:470). The researcher is of the opinion that the majority of universities, including the U1, are working with regard to their main functions in “silos”. Walls” or “stovepipes” exist amongst some organisational functions (Rao et al., 1996:472). The researcher is moreover of the opinion that silo management might hamper an effective integration of the functions of resource allocation and planning in quality management. This is evident in the outcome of the audit report of U1 (CHE, 2007:13).

Areas 1 and 2 of the HEQC audit criteria encompass all dimensions of institutional quality management and cover aspects of input and process as well as outcomes (CHE, 2004b:1). This notion concurs with a “systems theory” approach. The researcher will therefore conduct this research from a typical “systems theory” approach, with the key assumption that everything is a system of some sort. The researcher believes that components of a system cannot be studied and analysed in isolation from each other. The components of a system should be subjected to reviews in order to determine whether they are operating properly and conforming to standards (Churchman, 1968:7). The following “essentials for all systems” (Higgs & Smith, 2006:27) will underpin this research:

- The system is a “whole”.
- Systems have goals/purposes.
- Systems have input and output.
- Systems take inputs and turn them into outputs.
- Systems need to be controlled.
- Systems work in a certain order.

Higgs and Smith (2006:28) state that a systems theory “is about finding out why some systems operate efficiently whereas others disintegrate”.

**1.2.2 VIEWPOINT OF THE HEQC**

The viewpoint of the HEQC (CHE, 2004a) regarding the responsibility of quality management has the following implications:

- Institutions should establish their own quality management systems.
- The quality assurance systems should be effective.
• They should be able to yield information that is reliable for quality planning, external audit and public reporting.
• There should be continuous monitoring of the arrangements for the support of teaching and learning.

The above-mentioned issues support Graham, Lyman and Trow's (1995:13) "key points" for quality assurance in higher education, i.e. that the responsibility for quality at an institution lies with the management of an institution and the maintenance and improvement of quality rest on internal procedures (identification of deficiencies, remedial actions and enhancement by means of external audits). The issues mentioned align also with the views of Geal, Harvey and Moon (1997:178) that quality-monitoring reports should feed into management decision-making processes.

1.2.3 EN RÉSUMÉ

The following are presented as conclusive remarks on the above-mentioned issues:

• The success of quality management at institutions of higher learning is to a "considerable extent, dependent on the integration of mechanisms for quality assurance and quality development with institutional planning and resource allocation" (CHE, 2004b:5).

• According to the HEQC, the majority of institutions of higher learning in South Africa, including U1, failed to a great extent to integrate quality management with planning and resource allocation.

• According to the HEQC criteria, the dimensions of planning and resource allocation of institutional operations (Area 1 of the HEQC institutional criteria) are essential foundational elements for the quality objectives of Area 2 to be achieved (teaching and learning, research and community engagement).

• The HEQC recommends that the U1 should establish a model that ensures the integration of quality management with planning and resource allocation.
1.3 RESEARCH QUESTION AND OBJECTIVES

1.3.1 RESEARCH QUESTION

According to Mouton (2002:53), a research problem is often formulated in the form of research questions. He refers to empirical questions that ask something about “world one”. World one has to do with physical objects, organisms, human beings and actions, social interventions, social organisations and institutions, as well as a collective form of systems and institutions (Mouton, 2002:52). The research problem of this study is concerned with world 1 objects (human beings and actions, social interventions in the form of systems, and social organisations and institutions). The study will also deal with the following contexts or “worlds” (Mouton, 2002:137):

1.3.1.1 The world of science and scientific research (world two)

The researcher selected issues from world one and makes these into objects of inquiry. The selected objects will therefore be subjected to systematic enquiry. The researcher wishes to generate a model for quality management that will ensure the integration of planning and resource allocation which might be valid for implementation at the U1 and other institutions of higher learning that have the same need.

1.3.1.2 The world of meta-science (world three)

Science is a “self-correcting” enterprise (Mouton, 2002: 139). The researcher will constantly submit decisions arrived at during this research to certain “quality checks” in order to ensure that the results are valid. Meta-disciplines such as philosophy and research ethics are relevant disciplines to ensure reflection during this study.

The problem of this research seems to be vested in the following question:

*What are the attributes of a quality management system in higher education that is effective to*

- integrate key elements of particularly quality management, planning and resource allocation;
- create management information; and
promote and enable continuous improvement.

1.3.2 RESEARCH AIMS AND OBJECTIVES

With reference to the above-mentioned research question, the aims of this study are to

1.3.2.1 develop a quality management system based on the TQM philosophy for the U1 which integrates key elements of quality management that will have a wider application for institutions of higher learning;

1.3.2.2 conceptualise and clarify the concept institutional quality management (with special reference to continuous improvement);

1.3.2.3 conceptualise and clarify the concepts planning and resource allocation;

1.3.2.4 identify good practices with regard to systems that provide for sufficient monitoring and evaluation to generate management information.

1.3.3 SUB-OBJECTIVES

The above research aims will be made operative into the following sub-objectives:

1.3.3.1 To reach a deeper understanding of quality management, quality systems and quality mechanisms in higher education which include the integration of quality assurance and development with planning and resource allocation

1.3.3.2 to utilise good quality management practices from other universities as well as information gathered from published literature in order to identify applications that support the integration of planning and resource allocation;

1.3.3.3 to identify useful and effective monitoring and evaluation systems as the basis for management information;

1.3.3.4 to relate and utilise the HEQC’s conceptualisation of quality management and the outcome of the empirical and literature study to the development of a model for the integration of quality management, resource allocation and planning.

1.4 METHOD OF RESEARCH

This research will allow cross-case analysis with other institutions of higher learning in order to ensure a richer theory building (Perry, 1998). This study will answer questions of meaning and explanation by means of investigation. An investigation will assist the researcher to reach a “deeper understanding” of the integration of quality management with institutional planning and resource allocation at
• the U1; and
• institutions of higher learning in South Africa that developed and successfully implemented a quality management framework that succeeds in integrating quality management with planning and resource allocation.

1.4.1 LITERATURE STUDY

The literature study forms an integral part of this study. The researcher will conduct a literature study in order to inform his conceptualisation of the major quality management issues, concepts and relevant models that are related to the purpose of this study. A literature study will be useful for the researcher in order to identify, collect and critically review certain theoretical frameworks that underpin this study.

Primary and secondary sources of data will be utilised in this study. Primary sources refer to the data that was gathered from organisations, institutions or relevant people (e.g. universities, quality assurance bodies, quality managers, etc.). Secondary sources are published materials (books, policies, articles, etc.). The researcher will utilise secondary sources in order to gather information on key concepts that are related to this study (Cooper & Schindler, 2003:152-153).

1.4.2 EMPIRICAL RESEARCH

Mouton (2002:52) argues that empirical research questions will provide answers to the questions: "what the case is" and "what the key factors are". With reference to the above introduction, problem statement and research question, this study will identify universities in South Africa that succeed to integrate quality management with planning and resource allocation. The researcher will also identify universities that successfully developed and implemented a model that ensures an integration of quality management, planning and resource allocation. This research will enable the researcher to identify the contributing factors which will inform the development of a generic quality management model that can be utilised by the U1 and other institutions of higher learning..

1.4.3 GROUNDED THEORY

Glaser (1994: 198) emphasise that quantitative methods can be used in Grounded Theory. According to Glaser and Strauss (2004), a researcher can generate theory from quantitative
data. Lösch (2006:133-142) successfully combined quantitative methods and Grounded Theory for researching E-Reverse auctions. Although this study will follow primarily a quantitative approach, it will include qualitative elements in the form of open-ended questions. The latter will contribute to this study in reaching a deeper understanding. The following figure illustrates how the objectives of this study will be achieved (Grounded Theory approach):

**FIGURE 1.1:** Grounded Theory Approach

An exploratory investigation with a grounded theory approach is suitable for this study as it will help the researcher to

- investigate and describe concepts, quality mechanisms and systems at universities of South Africa (specific setting);
- explore “new territory” in terms of the integration of institutional planning and quality mechanisms (Denscombe, 2003:113; Weiman & Kruger, 2001:23);
- understand how the U1 and other selected universities deal with the concept of ongoing improvement of quality and integration of quality management, planning and resource allocation; and
- develop a model for the integration of planning, resource allocation and quality management.

An “extreme” implementation and understanding of the grounded theory approach expects a researcher to start research without any fixed ideas about the object to be investigated. The
The researcher will rather follow a moderate and feasible version of the grounded theory approach (Denscombe, 2003:115). The researcher will therefore accept the previous theories, existing quality management practices on national and international levels and his personal experience as a quality manager at a university of technology which will have an influence on the study.

1.4.4 RESEARCH POPULATION AND SAMPLE

This research will be conducted with all public universities in South Africa. According to Cooper and Schindler (1998:72), a sample is a part of the target population, selected to represent that target. Non-probability sampling will be used in this research.

1.4.1.1 Non-probability sampling

The objective of this research is not to give a true cross-section of the population, but the researcher will rather explore "a range of conditions". (Cooper & Schindler, 1989:244).

Purposive sampling (Welman & Kruger, 2001:63) is the most important kind of non-probability sampling and will be used in this study. Judgment sampling will be used; the researcher will collect information from the quality managers of institutions, institutional planners or, alternatively, from any senior staff member who is assigned at an institution or any person that is responsible for the institution's quality management. The researcher has been a quality manager for almost ten years. He will therefore rely on his experience and expertise as well as that of senior and middle managers of institutions of higher learning, quality managers of institutions of higher learning, quality researchers and institutional planners.

1.4.1.2 Size of the population

- The literature study will inform the development of a questionnaire. A questionnaire will be submitted (electronic mail) to each university in South Africa. Quality managers of institutions or senior staff with this responsibility will complete the questionnaire. The size of the population is N 21. The size of the population makes it practical to involve all South African institutions of higher learning for the purpose of data collection. Sampling is therefore not relevant with regard to the population. One questionnaire per institution will be sent out to be completed by the respective quality managers of institutions of higher learning.
in South Africa. The information collected from the questionnaires will be utilised to identify good quality management practices of the integration of planning and resource allocation at South African universities. The information gathered by means of a questionnaire will assist the researcher in identifying institutions that successfully develop and implement a model for the integration of quality management, planning and resource allocation followed by the collection of qualitative data. (Glaser & Strauss, 2004:229).

1.5 RESEARCH INSTRUMENT, VALIDITY AND RELIABILITY

According to Kaplan and Maxwell (1994) the understanding of a phenomenon from the point of view of the participants and their particular social and institutional context is largely lost when textual data is quantified. Pre-coded questions, as well as open-ended questions will be utilised. An open-ended questionnaire, as well as a pre-coded questionnaire will be furnished to the respondents. The responses of the pre-coded questionnaire will be quantified. The data will help the researcher to identify elements of good practices with regard to the integration of planning, resource allocation and quality management based on a literature study.

1.5.1 QUESTIONNAIRE

The “internet” type of questionnaire will be used as quantitative data collection method. Investigative questions will be used. Factual information as well as opinions will be collected. The researcher will keep good record with regard to the questionnaires (Denscombe, 2003:150). Open-ended questions will allow the researcher to collect information characterised by richness and complexity. The closed type of questions will allow the researcher to ask questions that are uniform and will yield data that can easily be quantified and compared.

Record will be kept from the outset of the research regarding to whom a questionnaire was send, and the date of sending. Each questionnaire will be numbered with a serial number in order to identify the date of distribution, the place and the respondent. Responses can therefore be checked. Questionnaires will only be sent to institutions that have given approval to the researcher to conduct the survey. Conclusions will be drawn and verification of data will take place as an ongoing process during the study (Fetterman, 1989).
1.5.2 CONCEPTUAL FRAMEWORK

The researcher will start the study with a set of ideas which can be regarded as a conceptual framework. This framework determines “which questions are to be answered by the research” and how empirical methods are to be used in order to find answers to the research questions (De Vos, 2007:34-35). This is in line with the view of Riley (1963:5-6) that the research process usually starts with an organising image of the phenomena that will be investigated.

The researcher is not aware of universities that developed quality management frameworks that might contribute to the successful integration of quality management, planning and resource allocation. This research will therefore be conducted in a relatively new area (in this case the integration of planning and quality mechanisms in order to ensure ongoing quality enhancement). Specific hypotheses are not always feasible (Welman & Kruger, 2001:23). The researcher finds no evidence of a generic framework for the integration of quality management, planning and resource allocation in South Africa. There is, however, evidence of the utilisation of the Deming Circle (PDCA model - Planning, Deployment, Check and Adjustment) for ensuring ongoing improvement at universities abroad which can inform this research (USC, 2007:1). A university in South Africa (U2) implemented the ADRI (Approach, Deployment, Results and Improvement) model with a certain degree of success. This model concurs to a great extent with the elements of the PDCA model.

The following should be regarded as a set of ideas that will direct this study in order to reach the objectives and sub-objectives of this study and to develop a model for the integration of quality management, planning and resource allocation:

- The PDCA model (Planning, Deployment, Check and Adjustment) of Deming has been adapted by universities in especially Australia and the USA in order to ensure ongoing enhancement of quality at institutions of higher learning.
- The systems theory.
- Relevant research outcomes on national and international levels.
- Expertise and experience of quality practitioners, senior managers of universities and institutional planners.
- A critical reflection on the ADRI model at the U2.
1.5.3 VALIDITY AND RELIABILITY OF RESEARCH METHODS

Construct validity (the relation between the questionnaire and underlying theories) will be ensured by means of the researcher’s literature review and from his experience as quality manager.

1.5.3.1 Questionnaire surveys and literature analysis (document analysis: evaluation of reports, government documents and opinions) will be utilised in order to triangulate the findings of the research. This will ensure the validity and reliability of the study (Fettermen, 1989). The relevance of the questionnaire will be tested by means of a reliability analysis (Yaffee, 2007). The data will be captured by using the Statistical Package for Social Sciences (SPSS) software.

The questionnaire will have the following characteristics in order to ensure that it qualifies as a “research questionnaire” (Denscombe, 2003:144):

It will be designed to collect information which can be used subsequently as data for analysis. The purpose of the questionnaire will be to discover things (exploratory). It will consist of a written list of questions, open-ended as well as close-ended. Each person who completes a questionnaire will read an identical set of questions in order to allow for consistency and precision. Eventually this will help with the processing of the answers after data collection.

The researcher will also collect data and information from relevant documents (quality assurance policies, reports, government publications etc). The documents will be carefully analysed by using a document analysis guide (purpose of document, target audience, relevancy to research questions etc). The data and information will then be integrated into a framework or model that offers an accurate interpretation of the collected material.

1.6 ETHICAL ASPECTS

The study will be conducted after permission has been granted from the relevant institutions. With regard to sensitive information that can harm an institution or an individual, the rights of the respondents will be protected. This will be done by explaining to the respondents that
confidentiality of the responses will be maintained, and that names and addresses will be destroyed after the research process has been completed (Cooper & Schindler, 1998:109).

Prior to the commencement of this study, the researcher will submit an application to the North-West University's (NWU) Ethics Committee. This research will only be conducted after the researcher has been granted formal approval from the NWU's Ethics Committee and will be conducted according to the code of the NWU's approved Ethical Policy.

1.7 CONTRIBUTION OF THE STUDY

This study will be a contribution to quality management of the U1, but also to institutions that fail to integrate quality management, planning and resource allocation on national and international levels. The study is a clarification of the concept of integration of planning and resource allocation within the notion of continuous improvement as required by the HEQC/CHE. It will enable institutions of higher learning to reach a deeper understanding of quality management to develop or refine their own quality management models in order to integrate quality management, resource allocation and planning.

The model for the integration of quality management with planning and resource allocation will be a solution for universities in South Africa to align them with international good practice with regard to quality management. It will address the current "grey area" with regard to the interpretation and implementation of the concept within the domain of higher education management in South Africa. The integration of quality planning and resource allocation within the process of quality management will have a positive impact on the outcome of external institutional audits and the enhancement of academic quality. As mentioned previously, the relevance and value of this study have been emphasised in August 2007 by the HEQC Institutional Audits Director, Dr Mark Hay (2007) after his perusal of this proposed research, with reference to the tendency that institutions of higher learning in South Africa in general fall short of successfully integrating quality management with planning and resource allocation.

1.8 CHAPTER DIVISION

Chapter 1 : Introduction

Chapter 2 : The South African Higher Education Sector
Chapter 3 : Quality Management in Higher Education
Chapter 4 : Planning and Resource Allocation
Chapter 5 : Empirical Research Design
Chapter 6 : Data and Information Analysis and Interpretation
Chapter 7 : Conclusion and Recommendations
Chapter 8 : A model for the Integration of Quality Management, Planning and Resource Allocation