An Investigation into the Effectiveness of the Higher Colleges of Technology Quality Programme in the United Arab Emirates

Submitted by

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ABSTRACT

This study focused on quality management at the HCT. The HCT implements a quality programme, the Program Quality Assurance (PQA). Based on the Baldrige's Education Criteria for Performance Excellence, which comprises seven Criteria, the study added an eighth Criterion, that is, Organisational Culture, to investigate whether or not the added Criterion has any impact on the implementation of the quality programmes. Both quantitative (using questionnaires) and qualitative (using interviews and content analysis of the PQA) approaches were used to identify the influence of Organisational Culture on the seven Baldrige Criteria and on the implementation of the quality programmes by the HCT. A questionnaire based on the SERVQUAL methodology was also employed to identify the extent of satisfaction of the HCT students with the quality of services and programmes offered to them by the HCT.

Quantitative Research findings indicated that Strategic Planning is related to Leadership and MAKM, Staff Focus is related to Leadership and MAKM, Process Management is related to Strategic Planning, Staff Focus and MAKM, Process Management and Leadership are indirectly related through Strategic Planning and Staff Focus, Staff Focus is related to Strategic Planning, Student Focus and MAKM, Student Focus and Leadership are indirectly related through Strategic Planning and Staff Focus, Results is related to Process Management and Student Focus, Results and Leadership are indirectly related through Strategic Planning, Process Management, Staff Focus and Student Focus, and There is a relationship between Organisational Culture and the MBNQA seven Criteria.

In terms of student satisfaction with the services provided by the HCT, the majority of respondent students agreed with all items of the SERVQUAL questionnaire. The Tangible dimensions were the utmost concern by HCT students, followed by the Assurance dimensions.

The HCT's organisational culture was also found to have substantial influence of the outcomes of the other seven categories of the MBNQA.

CERTIFICATE OF RESEARCH

This is to certify that, except where particular reference is made, the work included in this thesis is the result of the candidate. Neither this thesis, nor any part of it, has been presented, or is at present submitted, in candidature for any degree at any other University.

Signed: …….

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Date: ……...…….

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It is with pride and honor that I dedicate my book to His Highness Sheikh Khalifa bin Zayed Al- Nahayan, The United Arab Emirates President. This work could not have been successfully accomplished without His Highness's support. My work reflects the UAE's efforts in both leadership and government to improve the standards of higher education and is a simple contribution to the UAE advancement in higher education management and more valuable work is yet to come that will enhance the quality of educational development.

To His Highness Mohammed bin Rashid Al Maktoum, Vice President, Prime Minister of the UAE, and Ruler of Dubai who is not only a beacon of light to the Emirates but also the world and is responsible for putting Dubai on the world map.

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TABLE OF CONTENTS

CHAPTER ONE
INTRODUCTION

CHAPTER TWO
UAE, HIGHER EDUCATION AND HCT

CHAPTER THREE
LITERATURE REVIEW

CHAPTER FOUR
PERFORMANCE MEASUREMENT SYSTEMS

CHAPTER FIVE
RESEARCH METHODOLOGY

CHAPTER SIX
QUALITATIVE ANALYSIS

CHAPTER SEVEN
ANALYSIS OF SURVEY STUDY

CHAPTER EIGHT
DISCUSSION OF QUANTITATIVE RESULTS

CHAPTER NINE
GENERAL DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

LIST OF FIGURES

LIST OF TABLES

Abbreviations

MBNQA	Malcolm Baldrige National Quality Awards.
UAE	United Arab Emirates
HCT	Higher Colleges of Technology
PQA	Program Quality Assurance
TQM	Total Quality Management
MAKM	Measurement, Analysis and Knowledge Management
AQA	Academic Quality Assurance
EFQM	European Foundation for Quality Management
ADMC	Abu Dhabi Men's Collage
GCC	Gulf Co-operation Council
GDP	Gross Domestic Product
HE	Higher Education
ADU	Abu Dhabi University
PSAUD	Paris-Sorbonne University Abu Dhabi
AUD	American University in Dubai
LMD	License-Masters-Doctorate
BUiD	British University in Dubai
UK	United Kingdom
GSSC	Government Secondary School Certificate
CEPA	Common Educational Proficiency Assessment
CERT	Center of Excellence for Applied Research and Training
BS	British Standards
KSAs	Knowledge, Skills and Attitudes
W.O.M	Word-of-mouth
SERVQUAL	SERVice QUALity
SERVPERF	SERVice PERFormance
P - E	Performance - Expectation
HEQC	Higher Education Quality Council
ISO	International Standards Organization

CMI	Conceptualised Multiple Intelligence
PSRBs	Professional and Statutory Regulatory Bodies
AQUA	Australian Universities Quality Agency
AQF	Australian Qualifications Framework
SPC	Statistical Process Control
EQA	European Quality Award
ANOVA	Analysis of Variance
KC	Key Criteria
IED	Institutional Effectiveness Directorate
SACS	Southern Association of Colleges and Schools
SRS	Student Record System
ACS	Academic Service
LLC	Library Learning Centre
PAC	Programme Advisory Committee

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The use of quality management has become widespread among organisations during the past decades. During that period quality management has been realised as a major edge for competitiveness and long-term profitability (Hansson et al., 2003). A variety of strategies are adopted by companies to boost their position in the market place, including: teams, quality assurance, just-in-time, total quality management, Six Sigma, lean manufacturing, and others. Quality programmes have been increasingly used in the higher education context throughout the world. Becket and Brookes (2006) claim that in many countries and cultures the issue of quality management has been on the agenda of higher education institutions for some time. They also indicate that higher education for the masses and a growing climate of increasing accountability are often cited as the underlying principle for a greater emphasis on quality. Hence, there has been a good deal of research into the subject of quality in higher education, with well-recognised contributions from all over the world Becket and Brookes (2006) cited a number of authors and studies in support of this claim, including Colling and Harvey (1995) and Cullen et al. (2003) from the UK, Wiklund et al. (2003) from Sweden, Lawrence and McCollough (2001) from the USA, Martens and Presser (1998) from Australia, Pounder (1999) from Hong Kong, and Borahan and Ziarati (2002) from Turkey.

1.2 Background and Context

Substantial interest in quality assurance in educational establishments in general, and in higher educational institutions in particular, has emerged since the early 1990s (for example, Colling and Harvey, 1995; Cullen et al., 2003). However, despite the debate about quality worldwide, the concept of quality when applied to higher education has been inconclusive (Sahney et al., 2004).

Harvey (1994) found that there are widely different conceptualisations of quality in education. Harvey and Knight (1996) grouped these conceptualisations into five distinct though organised ways of thinking about quality, as explained below*:*

1. Quality in education can firstly be seen as "exceptional", with three concepts relating to being distinctive, exceeding very high standards and passing a set of required standards; each of which is subject to debate.

2. Quality of education is also perceived in terms of "consistency", in particular concerning the processes involved through specifications, to be achieved through a "zero defects approach and a quality culture".

3. Quality is further perceived relative to the purpose of the product and or services. This in turn raises three issues, that is, fitting the customer specifications, mission-based fitness for purpose and customer satisfaction.

4. Quality is further viewed as, "value for money via efficiency and effectiveness, obviously associated with accountability and focus on performance indicators, though such focus on performance indicators is debatable.

5. Finally, quality is viewed as transformative in relation to a qualitative change or form to incorporate cognitive transcendence in which education is understood to be a continuous process of transformation encompassing empowerment and enhancement of the customer.

1.3 Importance of the Study

Becket and Brookes (2005) have indicated that quality management is on the agenda for higher education institutions in many countries and many cultures. Whether this inclusion is a result of an increasing climate of greater than ever accountability or an increase in the size and diversity of student populations, as maintained by Oldfield and Baron (1998), both quality assurance and quality enhancement are now deemed essential components of any quality management programme (Brookes and Downie, 2002; Becket and Brookes, 2005). Consequently, there has been much research (e.g., Becket and Brookes, 2005; Anderson, 2006; Gift et al., 2006; Houston, 2007; Dounos and Bohoris, 2008) into the subject of quality in higher education, with substantial contributions from the UK, Australia, Norway, and the USA, amongst others.

The state of higher education in the Emirates has experienced massive changes since the foundation of the Federation late in 1971. Then, there was no higher education at all. At present, more than fifty universities and colleges are operating alongside a large number of Higher Colleges of Technology, including many private sector higher educational institutions, for example, UAE University, Zayed University, Abu Dhabi University, Sharjah University, American University in Dubai and Sharjah. This massive increase in higher education institutions, relative to the small UAE population, indicates the high intake of higher education and Emirates youths are joining them in their thousands. For example, the HCT started in 1988 with 239 students in four colleges (UAEInteract, 2006) which increased to more than 16,000 in 2008 (Higher Colleges of Technology, 2008), a massive increase within two decades. The Emirates University started with 502 students 1977/78, a figure which increased to 14,741 in 2006/07, which is also a massive increase over three decades. State-run higher educational institutions are not short of funds; and so do private sector institutions. This is one of the reasons which have attracted thousands of young people in the Emirates to join higher education. In order to ensure high quality of teaching, research and of higher education graduates, the state's policy engages in practices that raise the standards of teaching, research and administration to cope with the global developments in higher education, and each higher education institution has developed its quality programmes, the Program Quality Assurance of the HCT is a good example in this area.

1.4 Quality at HCT

HCT is committed to maintaining the highest quality in all its programs, and has a rigorous program quality assurance (PQA) system in place for this purpose. The primary aims of the PQA system are to contribute towards improvements by colleges and Divisional Academic Teams (DAT) in providing students with the best opportunities for academic and personal success; and to provide a framework for colleges and Divisional Academic Teams to report how they are contributing towards the HCT achieving its mission (Higher Colleges of Technology, 2005).

As part of the PQA, the Higher Colleges of Technology Learning Model defines eight graduate outcomes which are to be achieved through each programme, and these are evaluated annually. The HCT places a strong emphasis on international accreditation and benchmarking of professional programmes (HCT, 2008). The PQA is basically a process-based model (Institutional Effectiveness Directorate, 2003a). The PQA system includes an annual review of the colleges' PQA work, using seven Key Criteria and three key questions (HCT, 2006a). It is argued that quality review activities can be seen as a outstanding force for improvement that is perceived as essential by the staff involved (Scott, 2001). Accordingly, the task is to establish a system where staff value quality management work as relevant and contributing to their basics of their work (Martin. 1999, in Wahr et al., 2002). This is also considered and strengthened always across the organisation's systems (Senge, 1990, in Wahr et al., 2002). Most crucially, the benefits in engaging in quality activities should compensate the costs and be seen as doing so by all the stakeholder groups.

In terms of the link of HCT programmes and offerings with the industry and community, the HCT offers more than a hundred professional programmes that are relevant to local industry and community at different qualifications, including diploma, higher diploma and bachelor level. The HCT programmes are designed in consultation with the local industry and key players in the public sector industry, via the various advisory committees, and at the same time the HCT programmes are also internationally reviewed and accredited by involving international auditing agencies, as explained in Chapter Six, Part One.

Quality assurance programme implemented at the Higher Colleges of Technology is audited both externally and internally. The external audit comprises Institutional Accreditation, and Program Benchmarking Key Criteria (Institutional Effectiveness Directorate, 2003a).

External auditing is carried out through international bodies visiting HCT once every year. External auditors check the system by reporting HCT's performance in terms of achieving the objectives, reviewing programme curricula, and staff development.

External auditors also suggest procedures to be implemented in order to strengthen the performance of the system.

Internally, the HCT system is audited at two different levels. The first level is through the industry, which includes a committee consisting of major private and public sector managements who meet with the HCT top management and programme developers. The Committee checks how the programmes suit their business needs and requirements, and how well the graduates fit into these needs and requirements, as well as what future programmes are required, and how the industry can help in developing these new programmes. The second level is performed internally by each individual college, given that there is a department concerning with quality in each of the HCT colleges. They carry out an ongoing process to make sure that the programmes are operated adequately in terms of their delivery and satisfaction of students as well as meeting the industry needs and requirements. The quality department liaises with each individual academic department to ensure that the external and industry requirements are met. Furthermore, every semester quality departments prepare reports indicating how each academic department is performing and suggest steps to be taken into consideration for the following semester. At the end of the academic year these departments prepare a detailed report with reference to the achievements within the year and liaise with the external and industry audits in their annual visits.

1.5 Contribution to Knowledge

The current study contributes to knowledge in the understanding of the role of quality assurance in higher education, by adopting the modified MBNQA criteria. This research is pioneer in shedding light on the application of TQM in higher colleges of Technology in the UAE. More specifically, the contribution was through the following:

- Developing Baldrige model by adding the effect of the HCT culture: One of the major problems in scientific research is that most -if not in all, of the studies undertaken and conducted in the USA, the UK and developed countries in general.

As a consequence, most of the theories and models have been developed in Western countries, which might or might not be suitable for developing countries in general and Arab countries in particular due to cultural and economic differences. To this effect, this research bridges this serious gap closes by taking into account the culture and traditions of the United Arab Emirates when the Baldrige model is applied.

- In addition to the above element, there is scarcity of research undertaken in the UAE about the impact of quality assurance in higher education in general and in Higher Colleges of Technology in particular. This gap in the research is very serious, and in order for improvement to be made in the country, decision makers need to understand the mechanisms of quality systems in general and how quality is being applied. To this effect, this research addresses this issue by contributing to our understanding of the application of quality in Higher Colleges of Technology. Moreover, satisfaction of students is also taken into account as explained in the next point.

- There is a tendency in serious research not to rely on single informants. Authors such as Wilson and Lilien (1992) and Kumar, stern and Anderson (1993) among others emphasised the need for multiple informants. This issue is almost as old as scientific research where there have always been doubts about the reliability and validity of relying on a single informant to arrive to a scientific finding. The current research is distinguished in its serious endeavour to rely on multiple informants despite having to exercise extra efforts and extra time to achieve this. To this effect, all of top management, staff and students were included in this study to gather data using different data collection techniques ranging from interviews to content analysis and questionnaires.

1.6 Aim and Objectives

The overall aim of the present study is to: investigate the performance of the current Quality programme implemented by the Higher Colleges of Technology (HCT),

United Arab Emirates (UAE), and its impact of Stakeholders' Satisfaction and Organisational Culture.

Having established the overall aim and identified the area of investigation, that is the implementation of the current quality programme implemented by the HCT, the following objectives are formulated:

I. To study the development of quality programmes in relation to higher education

To achieve this objective, literature relevant to the study will be reviewed. The literature relating to quality management is extensive, though the review will focus in particular on the implementation of quality programmes in higher education. The literature relating to service quality and customer satisfaction will also be reviewed.

II. Analyse the current quality programme implemented at the HCT

In order to achieve this objective, the following issues will be addressed, analysed, and discussed:

a) Undertake a content analysis of the current quality programme.

b) HCT management will be interviewed (using semi-structured interviews – qualitative research approach). Interviews will be held face-to-face to obtain their opinion and perceptions of the quality programme currently implemented by the HCT.

c) HCT staff concerned with the implementation of the quality programme will be surveyed using a quantitative questionnaire based on the seven Baldrige Criteria for Performance Excellence. An eighth criterion (Organisational Culture) was added to the seven Baldrige criteria to obtain respondents' opinion and perceptions of the quality programme currently implemented by the HCT.

d) SERVQUAL questionnaire will be employed to measure students' satisfaction with the services provided for them by the HCT.

III. To investigate whether the HCT culture has an impact on the application of quality programme.

To achieve this objective, the dominant culture within the Higher Colleges of technology will be identified through management and staff responses to the

interview and questionnaire items, respectively, in terms of whether culture promotes or hinders the implementation of quality programmes, accepts or resist change, and allows for the implementation of a more holistic approach to quality such as the implementation of TQM.

This investigation will help find out the dominant types of organisational culture in the HCT, whether it is group, developmental, hierarchical, or rational culture, and its impact on accepting change, based on the Denison and Spreitzer' (1991) classification of organisational culture.

1.7 Research Hypotheses

There are two different sets of hypotheses formulated for this research. The first set relates to the application of quality programmes in the Higher Colleges of Technology in the UAE. Those hypotheses were tested by distributing questionnaires to members of staff. The second set of hypotheses relates to the quality of service offered by the Higher Colleges of Technology, and those hypotheses were tested by means of SERVQUAL questionnaires distributed to HCT's students.

The literature shows different ways of approaching hypotheses formulation in relation to Balrdrige criteria depending on authors' focus and interest. The current research takes a generic approach that is seen as compatible with HCT as discussed in the literature review and research methodology chapters. To this effect, staff survey hypotheses tested in this study reflects the seven Baldrige criteria [see Section 5.4.1 relating to the research conceptual model (MBNQA), and Figures 2.1 and 2.2] and the added eight criterion, that is, organisational culture. The following hypotheses are tested:

1. Hypotheses related to Quality Management Infrastructure:

$H_{1.1}$: 'Strategic Planning' is related to 'Leadership' and 'MAKM'.

$H_{1.2}$: 'Staff Focus' is related to 'Leadership' and 'MAKM.'

2. Hypotheses related to the Quality Management Processes:

$H_{2.1}$: *'Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM.'*

$H_{2.2}$: *The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'*

$H_{2.3}$: *'Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'.*

$H_{2.4}$: *The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'*

3. Hypotheses related to the Quality Performance:

$H_{3.1}$: *'Results' is related to 'Process Management' and 'Student Focus.'*

$H_{3.2}$: *The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'staff focus' and 'Student focus'.*

4. Hypotheses related to the Organisational Culture:

$H_{4.1}$: *There is a relationship between 'Organisational Culture' and 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'.*

Hypotheses regarding the students' service quality are the following:

H_5. *Students' service quality is adequate.*

H_6. *Service quality of students is dependent on age.*

H_7. *Service quality of students is dependent on degree studied.*

H_8. *Service quality of students is dependent on gender.*

1.8 Significance of the Study

A large number of higher education institutions, both in the developed and developing countries, have embarked on a mission to improve quality such that to remain accredited and competitive. Examples include University of Wales Cardiff Quality Assurance Programme (Daniels, undated), the Quality Assurance of Engineering Programmes at the University of South Australia (McDermott et al., 2004), the Quality Assurance System at the Norwegian University of Life Sciences (Norwegian University of Life Sciences, 2008), Academic Quality Assurance (AQA) at the University of Salford (University of Salford, 2007), and many others in the UK and other countries. During the 1990s, many universities have become either partly or wholly involved in quality assurance programmes implementation. Embracing quality programmes by many universities have been attributed to the same reasons which led industry and government to embrace it (Tuttle, 1994): Rising costs, reductions in funding and fluctuating enrolments, combined with public demands for higher quality have been noted as raising many questions on university campuses.

The findings of the present study will help add or contribute to our knowledge of the application of quality programmes in higher education in the UAE.

1.9 Data Collection

There are a number of methods to collect data from participants in research projects, including questionnaires, interviews, observations, organisational official documents, and archival records. The present study employs the quantitative approach to research, using questionnaires, and qualitative approach to research, using semi-structured interviews. It also uses HCT's publications and documents, especially those relating to the quality programme implemented by the HCT, that is, Program Quality Assurance (PQA).

Quantitative data are collected from HCT staff, to gauge their responses to the seven Malcolm Baldrige criteria, in addition to an eighth criterion – organisational culture – added by the researcher to the existing seven criteria; and to students, using a SERVQUAL questionnaire, to measure their satisfaction with the services provided by the HCT. Questionnaires were sent through the electronic mail, whereas interviews were held face-to-face and taped.

1.10 Ethical Consideration

Blaxter et al. (2006) argue that carrying out ethically informed social research needs to be the aspiration of all social researchers. They also indicated that ethical issues arise mainly in research designs employing qualitative approaches to data collection. The present study involved using qualitative methods as well as quantitative methods. Accordingly, the privacy and anonymity of participants in the present study, especially participants involved in the qualitative study (those involved in interviews) whose privacy, confidentiality, anonymity and consent to participate in the study, needed to be protected. To achieve these ethical issues, the researcher strived to protect the rights of the participants in the present study, and made sure that their anonymity is maintained such that they will not face any repercussion, if any. The researcher also obtained the HCT's top management's consent to undertake the field study and to have access to staff and students. The researcher also employed high standards of research practices, such as, research design, collection of data and information, and analysis, interpretation and discussing data generated during the course of the study. Thus, all information relating to the identity and position of the participants and interviewees were solely used for research purposes and were not revealed. This assurance has been given to all participants, especially interviewees.

1.11 Overview of Thesis Structure: Chapter Outlines

Based on the research questions and the development of the theoretical framework (modified Baldrige Criteria for Performance Excellence, after adding an eighth criterion

to the existing seven criteria, namely, organisational culture); it is anticipated that the thesis will be structured as follows:

Chapter One: Introduction

This chapter introduces the study and contains general information outlining the background, context importance and significance of the study. It also introduces study aims and objectives, research hypotheses, ethical consideration and thesis structure.

Chapter Two: UAE, Higher Education and HCT

A general overview of the UAE is presented in this chapter, with special reference to its higher education system and focuses on the Higher Colleges of Technology. Issues relating to UAE geography, demography, political situation, and economy are discussed.

Chapter Three: Literature Review

An overview of the literature relating to quality is provided. Literature relating to service quality, models of service quality measurements, quality assurance and quality gurus is also reviewed and analysed.

Chapter Four: Performance Measurement Systems

Literature relating to various performance measurement systems is reviewed relating to Deming Prize, the Malcolm Baldrige National Quality Program (MBNQP), and the European Foundation for Quality Management (EFQM) Business Excellence Model. The eight criteria of the modified Baldrige Criteria for Performance Excellence are also reviewed.

Chapter Five: Research Methodology

Research design and research methodology are outlined in this chapter. Research approaches and instruments employed to generate primary data and information required are also explained and the use of research techniques is justified. Formulation and

design of questionnaires and interview schedule are also explained. Generation of secondary data required to discuss research primary findings is also documented.

Chapter Six: Qualitative Analysis

This chapter consists of two parts. In Part One the contents of the HCT's program Quality Assurance (PQA) are analysed and the PQA is critically discussed in this chapter. Key criteria with reference to Abu Dhabi Men's College (ADM) are also analysed, as an example, since all colleges operate under the same programme. A critical discussion of the PQA is also provided.

In Part Two, the findings of the qualitative study (responses to semi-structured interviews conducted with some of the HCT management responsible for the implementation of the currently implemented quality assurance programme) are analysed and discussed

Chapter Seven: Analysis of Survey Study

Data generated using MBNQA questionnaire (staff responses) and student satisfaction, in response to the SERVQUAL questionnaire items, are analysed. Relationship between the MBNQA and Organisational Culture variables are also explained

Chapter Eight: Discussion of Quantitative Results

Main findings in responses to the MBNQA questionnaire items and the main findings of the SERVQUAL questionnaire items, analysed in Chapter Seven, are discussed in the light of the relevant literature.

Chapter Nine: Discussion, Conclusions and Recommendations

In this final chapter, a general discussion of the key research findings is provided. Conclusions of the main findings are also drawn up and recommendations for future are presented.


الإمارات العربية المتحدة
United Arab Emirates

CHAPTER TWO

UAE, HIGHER EDUCATION AND HCT

2.1 Introduction

The key objective of this chapter is to present a general background of the United Arab Emirates (UAE), with special focus on its higher education institutions. The chapter considers this general background of the country in terms of four main sections. Section 2.2 relates to the UAE geographical location and characteristics. Section 2.3 considers UAE demographic factors. Section 2.4 considers the political and economic situation of the country. Section 2.5 provides a background of the higher education in the UAE.

2.2 Geographic Location

The UAE occupies an area along the south-eastern tip of the Arabian Peninsula, close to the entrance of the Arabian Gulf. The UAE occupies an area of about 82,880 square kilometres; of which, Abu Dhabi accounts for 87% of the country's total landmass. This area includes an archipelago which extends over approximately 5,900 square kilometres, thus it ranks third among the Gulf Co-operation Council States after Saudi Arabia and the Sultanate of Oman. The areas of individual Emirates and their percentages of the total area are presented in Table 2.1.

Table 2.1. Areas of individual Emirates and percentages of total area

Emirate	**Area (km^2)**	**%**	**Emirate**	**Area (km^2)**	**%**
Abu Dhabi	67,340*	86.7	Fujairah	1,165	1.5
Dubai	3,885*	5.0	Umm al-Qaiwain	777	1.0
Sharjah	2,590	3.3	Ajman	259	0.3
Ras al-Khaimah	1,680	2.2	**Total**	**76,184***	**100.0**

*Area excluding islands.
Source: Ministry of Information (2001, pp. 30-40)

The UAE is bordered by Qatar to the west, Saudi Arabia to the south and west, and Oman to the north and east. A map of the UAE is presented in Figure 2.1. The capital and the largest city of the Federation is Abu Dhabi. Most of the UAE area is with a desert, comprising 80% of the country's total area. The remaining area is covered with precipitous rocky mountain and fertile plains.

Figure 2.1. Map of the United Arab Emirates

Though four-fifths of the UAE is desert, it has a contrasting landscape, from the towering red dunes of the Liwa to the rich palm-filled oases of Al Ain, from the precipitous Hajar Mountains to the more fertile stretches of its coastal plains [see Figure 2.1].

Offshore islands, low-lying islets, mangrove stands, *khors* (tidal inlets) and white sandy beaches characterise the shallow Arabian Gulf coast that borders the deserts of Abu Dhabi, stretching northwards beyond Dubai, Sharjah, Ajman, Umm al-Qaiwain and into the mountainous reaches of Ra's al-Khaimah. On the East Coast, the mountains fall to gravel plains, beyond which the deep oceanic waters of the Gulf of Oman wash against the dramatic shoreline and spectacular beaches of Fujairah.

The east coast is essentially a fertile plain where rainfall and subterranean water have allowed agriculture to be practiced for thousands of years. On the Arabian Gulf, there are more than 100 islands and numerous shallow inlets which add to the scenery; mangrove trees are common as are spawning for fish and birds.

2.3 UAE Demography

The UAE population has witnessed massive increases in recent years, especially since the establishment of the Federation on 2nd December 1971. The UAE population was estimated at 4,104,695 in 2005, compared to 4.041 million in 2003. The UAE population in 2007 increased to 5.19 million, and is projected to reach more than 6.41 million by 2010, and increase of 1.2 million, representing 18% increase. The population is also expected to reach 6.88 million in 2011. This rapid growth rate, which is among the highest in the world, is attributable to improved healthcare, enhanced environment and education systems and increased per capita income, but also, more importantly, to a large and ever-increasing immigrant workforce (Al Abed et al., 2006).

2.4 Political Situation

The UAE is a Federation of seven Emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Qaiwain, Ra's al-Khaimah, and Fujairah. The establishment of the UAE Federation marked the fulfilment of Sheikh Zayed's dream. While, at the outset, the concept of federation was novel in the region, Sheikh Zayed had a resolved belief that the federation could be established on the basis of the common ties which bound the

different Emirates, and their centuries-old shared history and heritage (Center for Documentation & Research, 2007a). He had famously remarked: "*In harmony, in some sort of federation, we could follow the example of other developing countries*" (Center for Documentation & Research, 2007a,b). This remark illustrates his outstanding political acumen and vision for the future (Center for Documentation & Research, 2007a).

Sheikh Zayed was elected as the first President of the Federation in December 1971, a post to which he was unanimously re-elected at successive five-year intervals and held until his death in 2004. Sheikh Zayed skilfully steered the Federation against formidable odds to the point where it far surpassed all expectations. In Sheikh Zayed's own words, "*with the help of God and a sincere will, there is nothing that cannot be achieved in the service of the people if determination is firm and intentions are sincere*."

With regard to internal administration, Sheikh Zayed demonstrated a statesmanlike understanding of the basic principles of governance that he implemented to perfection by his years of experience and practice.

Another key feature of Sheikh Zayed's strategy of government was the encouragement of initiatives which were designed to conserve the traditional culture of the people, so as to familiarise the younger generation with the ways of their ancestors. In his view, it was of crucial importance that the lessons and heritage of the past were remembered (Al Abed et al., 2006, p. 20).

Nonetheless, in addition to all diverse achievements, Sheikh Zayed's lifelong interest in and commitment to the conservation of the natural environment and protection of wildlife, afforestation programmes and agricultural development, and desalination projects for the production of fresh water, made him a pioneer in the Arab World and brought him international recognition and laurels (Center for Documentation & Research, 2007a).

In terms of external relations, Sheikh Zayed, with his knowledge and experience of Pan-Arab affairs, instinctively understood the political forces operating in the Arab World. Owing to a combination of his friendly nature, personal popularity and judicious diplomacy, Sheikh Zayed successfully evolved a policy of friendship and cooperation with his neighbours in the Gulf and throughout the Arabian Peninsula (Center for Documentation & Research, 2007a).. The establishment of the Gulf Co-operation Council (GCC), consisting of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE at a summit held in Abu Dhabi in 1981, and the promotion of friendly relations with other Arab countries, are reflections of the UAE's determination to bolster solidarity with the rest of the Arab World (Center for Documentation & Research, 2007a).

In the international arena, Sheikh Zayed's sensible approach was based on the maxim of peaceful coexistence by "*promoting conciliation and defusing confrontation and conflict*" (Center for Documentation & Research, 2007a). As a result of strengthening the UAE's position worldwide, Sheikh Zayed scored a major success in the field of international diplomacy, which was further complemented by his proverbial generosity towards the needy and the suffering. His firm resolve, to alleviate the misery of mankind through large-scale financial and material assistance, raised him on a high platform and has earned honour and respect for his country.

The United Arab Emirates, which was fortunate to have been founded by a visionary leader, continues today to enjoy a wise and far-sighted leadership in the person of its new President, His Highness Sheikh Khalifa bin Zayed Al Nahyan public service spans the two historic stages of his nation's development. He was personally very close to the leadership of his late father, took inspiration from his example during his life-time, and acted as the main executive leader for his Government in the first stage of the foundation of the state. Today, he continues his leadership role in a new stage of development for the UAE that will witness the empowerment of his nation and its emergence on the global scene as a major world player.

HH Sheikh Khalifa, the eldest son of the late Sheikh Zayed was born in Al Muwaiji Fort, Al Ain, in 1948. Sheikh Khalifa received his early education in the sole school that

had been built in Al Ain by his father at that time. Sheikh Khalifa was fortunate to have the benefit of two public councils of the time, one was that of his father, and the other of his maternal grandfather, which were the finest schools for teaching the skills of political leadership and kept him close to the tribes, learning their ethos and characteristics, and acquiring management and communication skills.

During the following years, after being commissioned by his father, in 1966 when he was 18 year old, as his representative in the Eastern Province and the President of its legal system, Sheikh Khalifa held a number of major posts contributing to helping his father realise a seemingly impossible dream. He became the main executive leader of his late father's Government, overseeing, both on the local and federal levels, the implementation of all his major projects in the early historic stages of the founding the state. Throughout this early phase of leadership, Sheikh Khalifa exhibited the same unique characteristics inspired by his father, based on a modest and open management style. Fully dedicated to bringing prosperity and progress to his people, Sheikh Khalifa always dealt with those who worked with him with dignity and respect, giving them flexibility to take the initiative, skilfully maintaining their trust and motivating them to constant effort.

His responsibilities covered all fields on the local and federal levels in the domains of politics, economy, oil, defence and external affairs. He was appointed as Abu Dhabi Crown Prince in 1969, and moved to Abu Dhabi City where he assumed the command of the newly-created army, which was later to become the nucleus for the federal army. He was then appointed as the first Prime Minister of the Abu Dhabi government, prior to the establishment of the UAE federation, in which he also assumed the portfolios for Defence and Finance and oversaw the launching of the first development projects in the Emirate, then lacking in every conceivable infrastructure or service. Sheikh Khalifa assumed the office of Deputy Prime Minister in the first federal cabinet, and in 1974, he presided over the Executive Council of Abu Dhabi Emirate which replaced the local cabinet, and which became in effect the executive branch of local government overseeing the social and economic transformation of the emirate. In 1976, he was

appointed as the Deputy Supreme Commander of the UAE Armed Forces, where he continued his interest in developing the defence capabilities of the UAE.

His Highness Sheikh Khalifa was also in charge of a number of corporations and authorities formed to supervise the development process, including the Abu Dhabi Investment Authority, which has today become the world's most successful investment fund, set to guarantee the prosperity and welfare of the coming generations. Motivated by his keen interest in promoting the welfare of his citizens, he set up the Khalifa Housing Fund in 1979 to finance the construction of residential and commercial buildings for nationals at low administrative fees, allocating several billion Dirhams to the fund, which became the main driver for the construction boom in Abu Dhabi. He also launched a number of prizes to support the development programmes inside the Emirate, including the Khalifa Education Prize, Khalifa Excellence Prize, and the Khalifa Fund to support small and medium enterprises.

His Highness has personally, as well as through Abu Dhabi's Development Fund, launched an extensive programme of foreign aid and social development in developing countries. He established and continues to fund overseas schools, charity establishments, hospitals and orphanages. As well as his social work, His Highness has played an active role in strengthening the UAE's external relations with its Gulf, Arab, Islamic and international partners, through the exchange of official visits and through meetings with Arab and foreign officials and leaders and participating in international conferences.

Sheikh Khalifa bin Zayed was undoubtedly a full partner in the leadership of his country in its foundation stages, in that he actively shared in the execution of his late father's plans and in the fulfilment of his vision under his direct supervision and direction. He was instrumental during this process in developing the machinery of administration and government so as to transform the state from its early tribal origins to grow to be the fully modern and institutionalised country it has become today, so as to ensure its safe transition and survival in the twenty first century.

Hence, when the late President passed peacefully away in 2004, it was natural that his son and Crown Prince became the Ruler of Abu Dhabi, while Sheikh Khalifa's brother, HH Sheikh Mohammed bin Zayed Al Nahyan, became the new Crown Prince for the new era. At the same time, HH Sheikh Khalifa was unanimously elected as the UAE's new President by the Supreme Council of the federation. His confirmation as the new leader signalled to the people of the UAE and to the world that, as an historic epoch of the foundation of the state came to its close, during which an ambitious vision was achieved, turning a dream into reality, a new era had arrived. This will evidently be an era of empowerment for the UAE as it continues to strive for excellence and distinction on a regional and global stage.

HH Sheikh Khalifa's broad vision for this new era has been set out in a number of official papers. Perhaps the most important were two strategic documents. The first is the policy agenda of Abu Dhabi Government issued by Abu Dhabi Executive Council for 2007/2008. The second was in an official speech made before the Federal National Council in February 2007.

The seven member Emirates, known until 1971 as the Trucial States which had separate treaty with Britain, formed a federal state officially entitles *Dawlat al Imarat al Arabiyya al Mutahida* (State of the United Arab Emirates) (Al Abed et al., 2006, p. 38). Each of the seven member Emirates had their own institutions of government before 1971 and to provide for the effective governing of the newly formed federal state, the rulers agreed to draw up a provisional Constitution specifying the powers that were to be allocated to new federal institutions; all other institutions remained the prerogative of the member Emirates (Al Abed et al., 2006, p. 39). In May 1996, the provisional Constitution was amended making it permanent and naming Abu Dhabi as the capital of the state.

The UAE's federal system of government includes: Supreme Council, Council of Ministers (the Cabinet), a parliamentary body, Federal National Council, and an Independent judiciary, headed by the Federal Supreme Court.

2.5 The Economy

The UAE economy has developed massively over the past three decades. Oil and gas production, until recently, represented the mainstay of economy. However, the diversification of the economy and the massive developments in the non-oil sector, especially in services sector. Manufacturing sector also has its share. According to Kenzay (2006, p. 46), the manufacturing sector contributes around 14% to gross domestic product (GDP) and is the largest non-oil economic sector in the UAE.

The UAE is the tenth largest oil producer, the sixth largest oil exporter and has the fifth largest oil reserves in the world. While individual Emirates take responsibility for exploitation of their hydrocarbon reserves, if any, with Abu Dhabi definitely plays the major role in this regard, the role of the Federal Government has been re-organised, with a new Ministry of Energy that combines the former roles of the Ministry of Petroleum and Minerals and the Ministry of Electricity and Water (Al Abed et al., 2007).

The discovery of oil ushered the UAE into the industrial age. This process of industrialisation gathered momentum following the formation of the Federation. During the last two decades, with the Government's increasing emphasis on diversification and basic components, for example, capital and energy readily available, the manufacturing sector has made significant progress in the UAE (Kenzay Training, 2005).

Free zones have played an instrumental role in attracting manufacturing industries and today, hundreds of factories covering a wide range of manufacturing are distributed throughout the country. Cement, building materials, aluminium, chemical fertilizers and foodstuffs industries top the list, followed by garments, furniture, paper and carton, plastics, fibre glass and processed metals(Kenzay Training, 2005). Table 2.2 summarises UAE's GDP at base price by economic sectors at 2004 prices.

Table 2.2. UAE's GDP at base price by economic sectors at 2004 prices

Sectors		2003*	2004*	2005**	2006**
1	**Non Financial Enterprises Sector**	**274,873**	**328,702**	**427,364**	**531,185**
	Agriculture, Livestock, Fishery	9,152	10,100	11,028	12,241
	Mining	92,901	124,089	174,114	224,552
	A. Crude Oil & Natural Gas	2,136	123,261	173,195	223,422
	B. Other	765	828	919	1,130
	Manufacturing	42,215	49,546	61,194	73,433
	Electricity, Gas and Water	6,009	6,720	7,935	9,522
	Construction	26,072	28,468	34,980	45,124
	Wholesale / Retail Trade and Maintenance	5,460	38,682	52,998	62,538
	Restaurants and Hotels	6,525	7,343	8,946	10,431
	Transportation, Storage and Communication	24,692	27,263	32,642	38,517
	Real Estate and Business Services	25,355	29,540	35,920	46,121
	Social and Private Services	6,492	6,951	7,607	8,706
2	**Financial Enterprises Sector**	**19,992**	**22,318**	**28,426**	**35,674**
3	**Government Services Sector**	**30,737**	**32,201**	**34,735**	**39,025**
	- Household Services	2,065	2,126	2,382	2,627
	(Less: Imputed Bank Services Charges)	5,825	6,586	7,395	9,280
	TOTAL	**321,752**	**378,761**	**485,513**	**599,231**
	Total Non-Oil Sectors	**229,616**	**255,500**	**312,318**	**375,809**

Source: *Al Abed et al. (2006, p. 38)

**Al Abed et al. (2008, p. 71)

2.6 Higher Education in the UAE

While on the threshold of the fourth decade of its existence as a nation, the United Arab Emirates has made remarkable progress in establishing a strong and multi-dimensional higher education system to serve its young people.

Higher education in the Emirates is supervised, and regulated by the Ministry of Higher Education and Scientific Research and Scientific Research. There are a number of state-

run and private sector higher education institutions in the UAE. An overview of some of the UAE higher education institutions is provided below.

2.6.1 Public Sector HE Institutions

2.6.1.1 The United Arab Emirates University

This university was established in 1976 at Al-Ain (Ministry of Higher Education and Scientific Research, 2005a). His Highness the Late Sheikh Zayed bin Sultan Al-Nihayan envisioned the University becoming a federal institution of an Arab-Islamic identity, and a focus of intellect, culture, and science. This University has become a leading and pioneering institution in the region in education, research, and community service. Since its establishment, it has always given a very high priority to the development of its academic programmes and curricula that respond to the needs of the Emirates society and keeping pace with international academic developments and trends while preserving the values, policies and strategies of the country (Ministry Higher Education and Scientific Research, 2005a).

The Emirates University started with four faculties, and between 1976 and 1980 it opened three others. At present, the University includes ten colleges:

- College of Business and Economics
- College of Education
- College of Engineering
- College of Food and Agriculture
- College of Humanities and Social Sciences
- College of Law
- College of Science
- College of Sharia and Islamic Studies
- Faculty of Medicine and Health Sciences
- College of Information Technology

During the past five years, the University has witnessed a comprehensive development in the academic programmes and curricula offered by all of its faculties. It has also paid great attention to the quality of implementation and delivery of the programmes and curricula. Interactive teaching methods and technologies including computers and information networks are emphasised to provide an environment which fosters the students' creative thinking and self-learning abilities. This enables them to cope with rapidly advancing technologies (Ministry of Higher Education and Scientific Research, 2005a).

The number of students enrolled in the University has increased from 502 students in the academic year 1977/1978 to 14,741 in the first semester of the academic year 2006/07.

2.6.1.2 Zayed University

Zayed University was established in 1998 by the UAE federal government to educate UAE women (Ministry of Higher Education and Scientific Research, 2005b). It has campuses in Abu Dhabi and Dubai led by a single administration, and offers similar programmes on both campuses. The University currently enrols about 2,500 women. With the opening of a new campus in Dubai in 2006, it expects enrolment there to increase to 5000 students.

The University is based on an international model of higher education, and at present is organised academically into five colleges:

- Arts and Sciences.
- Business Sciences.
- Communication and Media Sciences.
- Education.
- Information Systems.

The primary language of instruction is English. The University expects its graduates to be fully bilingual in English and Arabic, proficient in the use of computing technology,

and strong in quantitative and research skills (Ministry of Higher Education and Scientific Research, 2005b). It also expects them to achieve significant intellectual and social development.

The University has instituted a unique Academic Programme Model which focuses on learning outcomes and incorporates them throughout the curriculum (Ministry of Higher Education and Scientific Research and Scientific Research, 2005b). The Academic Programme Model is supported through a complete educational programme including (Ministry of Higher Education and Scientific Research, 2005b):

- a readiness programme that ensures student proficiency in English;
- a core curriculum that provides a basis for more focused learning;
- in-depth studies in one of five colleges;
- an internship that provides practical experience for all students;
- a capstone experience through which students demonstrate their ability to integrate and synthesize what they have learned both in and out of class; and,
- Periodic assessment of student achievement in the Zayed University Learning Outcomes XE "Zayed University Learning Outcomes".

HCT, as a public sector HE institution will be dealt with later in this chapter, to provide more details about them given that they represent the research case study (see Section 2.6.3).

2.6.2 Private Sector HE Institutions

2.6.2.1 Abu Dhabi University

Abu Dhabi University (ADU) opened its doors in September 2003, with 1,000 students on its two campuses in Abu Dhabi and Al Ain; at present there are over 4000 students, representing more than 35 different nationalities (Abu Dhabi University, 2009). Unlike other colleges and universities in the UAE, ADU undertook the measures necessary to

ensure that all of the degree programmes offered had secured accreditation from the Ministry of Higher Education and Scientific Research in advance of any students enrolling in them (Abu Dhabi University, 2009).

The founders of the university envisioned an institution that would be among the best in the UAE, the Arabian Gulf region and throughout the world. This is a great challenge for a new institution of higher education, but one that can and will be attained in the years ahead. ADU's programmes, encompassing a variety of different cultures and structures, mirror the past and present of UAE society and anticipate the emerging future needs of the UAE. ADU offers a range of undergraduate and postgraduate degrees based upon the American model of higher education; in addition, several professional diploma and postgraduate diploma programmes, using the British system of postsecondary education, are available. The official language of the university is English; however, the university offers degree and diploma programmes both in English and Arabic. The English Language Institute at ADU assists students with the improvement of their English language skills such that they can study university degree programmes irrespective of their previous language proficiencies (Abu Dhabi University, 2009).

ADU is licensed by the UAE Ministry of Education and Scientific Research, and all of its degree programs have received accreditation by the Ministry. The University will add additional colleges and degree programs in the future to build upon the curricula presented by the founding colleges (Abu Dhabi University, 2009).

2.6.2.2 Paris-Sorbonne University Abu Dhabi (PSUAD)

PSUAD is a French-speaking higher education institution that attracts not only the best students from the UAE, but also the best students from all over the Middle East and the world (Paris-Sorbonne University Abu Dhabi, 2009).

The basic requirement to apply for the University is a secondary school completion certificate, and the University accepts applications irrespective of nationality, gender, or

religion. Students will be accepted for admission on a competitive basis. Early admission decisions will be made for those students exceptionally well qualified (Paris-Sorbonne University Abu Dhabi, 2009).

Paris-Sorbonne University Abu Dhabi offers a wide range of majors in Humanities and Law, and Master Programmes as well. The new Paris- Sorbonne University — Abu Dhabi follows the new European system of higher education, the License-Masters-Doctorate (LMD) system. The undergraduate part consists of a 3-year degree called a License. The graduate part comprises a 2 year Masters Degree, followed by a multi-year Doctoral programme. These degrees are accepted at any University in the European Higher Education Area (Paris-Sorbonne University Abu Dhabi, 2009).

2.6.2.3 American University in Dubai

The American University in Dubai (AUD) is a private institution of higher learning founded in 1995. The AUD serves both UAE and non-UAE students who seek outstanding career-oriented education. The curricula across its degree programmes are skill-based and professionally conditioned. The AUD promotes a collaborative learning mode; hence, it develops student's ability to work in teams (American University in Dubai, 2008).

The AUD's Mission is to provide for the varying educational needs of a culturally diverse and geographically dispersed student body with the goal of preparing students academically, personally, and professionally for successful careers (American University in Dubai, 2008).

The AUD maintains that in support of its philosophy and mission, its goals are to (American University in Dubai. 2008):

- enable an international student population to achieve personal and professional goals;

- enable students to rely on their cultural heritage and background as a foundation for their learning, growth and change;
- guide students in adapting their knowledge, training and skills to the workplace;
- foster the development of critical thinking and lifelong learning skills;
- instil the importance of ethical behaviour, responsibility and professional standards;
- provide academic programs, services, facilities and technologies that support team-based learning and contribute to students' intellectual development and personal growth;
- retain a diverse faculty comprised of experienced, qualified educators with industry-current expertise; and
- coach and prepare students for job placement and career success utilizing a network of professional and business contact

The AUD offers academic programmes across three schools and two departments:

- School of Business Administration. The school has three departments: Management and E-Business; Marketing and Marketing Communications; and Accounting and Finance. These Departments offer a range of courses at the undergraduate and graduate levels (http://www.aud.edu/Academic_Programs/Business/bus_index.asp).
- School of Engineering.
- Department of Information Technology. This department entertains three main concentrations which address all the major aspects of these enterprise level systems:
  - Application Development for Commerce and Industry
  - Database Design, Development, and Operations
  - Network Infrastructures Design and Operations
- Department of Interior Design.

- Department of Visual communication.
- School of Communication and Information Studies.

2.6.2.4 University of Sharjah

This University was established in 1997 as the first university in the Emirate of Sharjah. In less than 10 years, the University has achieved academic accreditation for most of its programmes at the bachelor's and master's levels (University of Sharjah, 2008).

The University is comprised of twelve colleges, which offer various academic programmes of study at the diploma, bachelor's and master's levels. The student population at the University has currently reached 7000 with a faculty of 370 (University of Sharjah, 2008).

The University has recently opened a complex for the Colleges of Medicine and Health Sciences, which includes the Colleges of Medicine, Dentistry and Pharmacy, medical research laboratories, and a Medical Sciences library in addition to other facilities (University of Sharjah, 2008). At present, a comprehensive medical teaching hospital is under construction to facilitate teaching in the fields of Medicine and Health Sciences. The University has been designed according to international specifications with an internal network server and international internet connections, offering the possibility of internet conferencing and seminars (University of Sharjah, 2008).

2.6.2.5 British University in Dubai (BUiD)

The BUiD was established in 2004 and is the Middle East region's first, research based, postgraduate university. It offers a unique opportunity for higher education, and as one of the region's most innovative institutions, it sets the standards for study and research that will significantly contribute to the technological innovation and growth of the Arab world and beyond.

The BUiD works in partnership with leading UK universities and offers advanced education and research in key disciplines. It has a partnership with the University of Edinburgh, University of Manchester, Cardiff University and the Cass Business School of City University London (British University in Dubai, 2008).

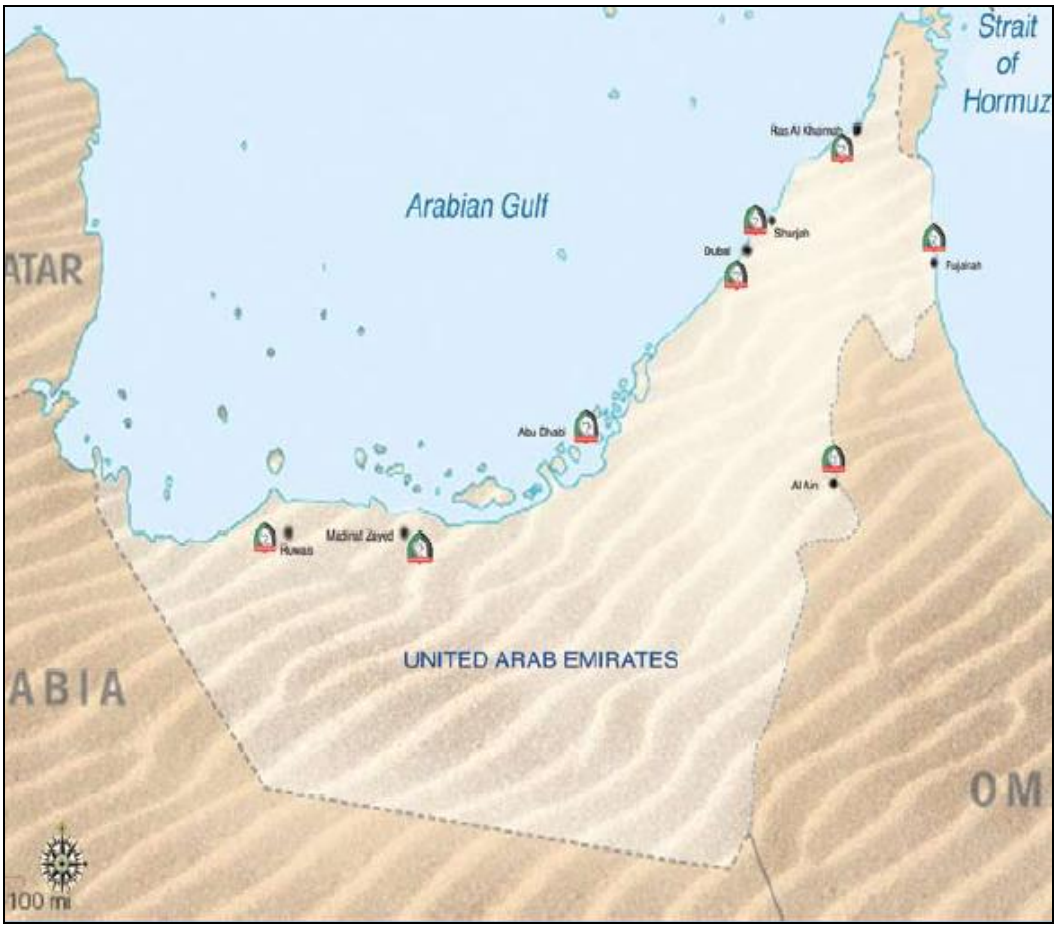
2.6.3 Higher Colleges of Technology (HCT)

The HCT are the largest higher educational institution in the United Arab Emirates with the present enrolment of more than 16,000 students, all of whom are UAE nationals, of whom more than 10,000 are females (Higher Colleges of Technology, 2008). Since the establishment of its four founding colleges in 1988, the Higher Colleges of Technology have grown and at present there are sixteen colleges at Abu Dhabi, Al Ain, Dubai, Ras Al Khaimah, Sharjah, Fujairah and the western region of Madinat Zayed and Ruwais (Higher Colleges of Technology, 2008), as indicated in Figure 2.2. The HCT offer an impressive range of programs, exceeding 80 programmes at four different credential levels, including: Diploma, Higher Diploma, Bachelor and Masters (Higher Colleges of Technology, 2008).

The Higher Colleges of Technology Mission is as follows (Higher College of Technology, 2008, p. 8):

> "*The Higher Colleges of Technology are dedicated to the delivery of technical and professional programs of the highest quality to the students, within the context of sincere respect for all beliefs and values*."
>
> *Graduates of the Colleges will have the linguistic ability to function effectively in an international environment; the technical skills to operate in an increasingly complex technological world; the intellectual capacity to adapt to constant change, and the leadership potential to make the fullest possible contribution to the development of the community for the good of its entire people."*

Figure 2.2. Locations of the colleges within the UAE
(Source: http://www.hct.ac.ae/publications_and_reports/aspx/prospectus.pdf).



The HCT also have also set out their guiding principles, as follows (Higher Colleges of Technology, 2006, p. 1):

1. *The HCT is founded on the principles of excellence and teamwork, and that employers require highly qualified and dependable graduates.*

2. *The HCT has reached a maturity level that enables us to assume our place of leadership as a premier post-secondary institution and fulfill our obligation to perform at the highest possible level.*

3. *The HCT has a commitment to keep pace wit the rapidly changing economy around us.*

4. *Our success as a college system depends on the success of each individual, each program and each college.*

During the academic year 2006-2007, the HCT employed 1,864 staff, including 1,092 faculty, 349 academic staff and 423 non-academic staff. Staff from fifty-seven countries make up the HCT's multicultural workforce with more than 52 percent of staff having attained qualifications to a masters or PhD level.

2.7 HCT's Acedemic Credentials

The academic credential conferred by the HCT, include: Diploma, Higher Diploma; and Bachelor Degree.

- **Diploma.** Occupation-specific skills at a technician level are emphasised over two years after the Diploma Foundation Year. The necessary skills, including English, Numeric, Computer Literacy and Personal & Professional Development, are developed in the Diploma Foundations Year to prepare students for entry into a Diploma programme (Higher College of Technology, 2006).

- **Higher Diploma.** Characterised by mixing theoretical knowledge and practical applications at a technologist level, over three years after the Higher Diploma Foundations Year. The necessary skills, including English, Mathematics, Arabic and Computer Literacy, are developed in the Higher Diploma Foundations Year to prepare students for entry into a higher Diploma or Bachelor programme (Higher College of Technology, 2006).

- **Bachelor Degree.** Minimum one year following Higher Diploma (or equivalent) or four years after the Higher Diploma Foundations Year, depending on the degree chosen. Theoretical perspectives are combined with critical thinking and decision-making applications (Higher College of Technology, 2006).

The Diploma Foundation Programme is designed to provide students with the basic English language and communications skills required to undertake social, work and college-related functions through English at the Council of Europe's Waystage language level. This programme also equips students with fundamental numeracy and computer literacy skills required for study on their Diploma programme. Students are always encouraged to develop basic personal and professional attributes for effective study and work through a Personal and Professional Development component, in addition to other important attributes, for example, global awareness, critical and creative thinking, teamwork, self-management, etc. (Higher College of Technology, 2006, p. 18). Programme entry requirements include Government Secondary School Certificate (GSC0 or equivalent with Common Educational Proficiency Assessment (CEPA) (Higher College of Technology, 2006).

The Higher Diploma Foundations programme is designed to provide students with the English language and communications skills needed to undertake social and study-related functions through English beyond the Council of Europe's Threshold language level. The programme also equips students with the mathematical and computing skills required for study on their Higher Diploma/Bachelor programme. Arabic Language instruction is also provided. Students are also encouraged to develop important personal attributes, for instance, global awareness, critical and creative thinking, teamwork, self-management, etc. (Higher College of Technology, 2006).

Over eighty different programmes are delivered in English, including: Business, Communication Technology, Education, Engineering Technology, Health Sciences and Information Technology. All programmes are designed in consultation with business and industry leaders to ensure that the skills students learn are job-relevant and to high standards.

All students must undertake a period of work placement in order to graduate from a Diploma, Higher Diploma or Bachelor Degree programme.

2.8 HCT's Links with Business and Industry

Strong ties to business and industry result in large numbers of Higher Colleges of Technology graduates finding rewarding employment. Industry links have led to the establishment of Higher Colleges of Technology's commercial arm, the Centre of Excellence for Applied Research and Training (CERT). The centre is involved in strategic alliances with a number of multinational organisations to collaborate on a full range of business and technology solutions (Higher College of Technology, 2008).

Graduates of the colleges will have the linguistic ability to function effectively in an international environment; the technical skills to operate in an increasingly complex technological world; the intellectual capacity to adapt to constant change; and the leadership potential to make the fullest possible contribution to the development of the community for the good of all its people (Higher Colleges of Technology, 2008).

The Academic Services directorate is dedicated to providing quality instructional, student and evaluation services, as well as academic resource and technical support to all HCT campuses."

To fulfil its mission, the Academic Services are committed to:

- Promoting and supporting teaching and learning excellence
- Ensuring high standards
- Offering services that respond to the needs of our students and staff in a manner that complements college activities
- Co-ordinating activities and services to improve our effectiveness and avoid duplication
- Creating an atmosphere that fosters and supports effective communications, a climate in which all staff are committed to the goals of Academic Services and HCT, and an opportunity for input into the decision-making process (Higher Colleges of Technology, 2008).

The Academic Services is structured into four functional areas: Academic Division Programme Management; Library and Learning Resources; Student Services, and Academic Alliances and Accreditation (Higher College of Technology, 2008).

2.9 The Centre of Excellence for Applied Research and Training (CERT)

According to Nicks-McCaleb (2005), as a strategic measure responding to PQA [1] feedback, and to ensure continues quality even after graduating from the HCT, it became apparent that a facility would be needed to allow members of the workforce to update their skills. Accordingly, over and above the acclaimed HCT programmes of study which lead to formal credentials, a branch of the organisation was established to provide for the specific and urgent needs in the workforce and community (Nicks-McCaleb, 2005); this branch is the Centre of Excellence for Applied Research and Training (CERT).

CERT was established in 1996 in Abu Dhabi, affiliated to Abu Dhabi Men's College (ADMC) in order to develop and support partnerships with industry; and to provide fee-for-service programmes to supplement those offered through the HCT. Nicks-McCaleb (2005) states that international organisations, including Honeywell and Luccent, have operational branches at CERT and partnerships have increased over a comparatively short period of time.

Educational courses offered at CERT relate to the very particular needs in the community and may be tailor-made to suit organisations and establishments in Abu Dhabi and Dubai. Nicks-McCaleb (2005) also indicated that courses might be short and intensive, being completed within a comparatively short period of time so that participants may return to work quickly with the necessary new skills; hence, contributing effectively to the country's economy and growth.

[1] PQA = Program Quality Assurance. PQA will be analysed in some details later in Chapter Six-Part One.

CERT fills a niche in the Emirates market which in most cases lacks established training departments within both the private sector and the government sector. This, according to Bahgat (1999), is partly due to the rapid development of the country.

CERT was established to provide specialised education and customised training to meet the specific needs of industry, corporations and public sector agencies. Since then, it has established a reputation of excellence for the quality of its programmes and at present is one of the largest private education providers in the Middle East. It is also mandated to foster technology transfer through collaborative ventures with international companies in applied research and related entrepreneurial activities and spin-offs (Higher College of Technology, 2006).

CERT's operations are undertaken in three distinct business units: Education Services, CERT Education & Research City, and CERT Technology Ventures

- **CERT Education Services.** This is in the business of developing and providing custom education, skills enhancement, and technology solutions for public and private sector clients. It provides training in languages, health and environment, work readiness, entrepreneurship, management, engineering, financial services and a range of corporate training customised for the needs of the industry. Clients include the largest public and private sector organisations in the region, including the UAE Military, and the Presidential Court (Higher College of Technology, 2006).

- **CERT Technology Ventures.** This provides an innovative approach to the creation of intellectual property and a knowledge based economy in the UAE. In 2006, CERT became the first organisation in South Asia, Middle East and North Africa region to offer supercomputing power through its acquisition of the IBM Blue Gene; the fastest and most muscular computing platform in the world (Higher College of Technology, 2006).

- **CERT Education and Research City**. CERT Education and Research City will provide a faculty and staff village, an early childhood education centre, a School for

Education of Gifted and Talented Children, a college, a university, a national research centre, an international technology incubator, as well as an hotel and conference centre. The city will have its own television and media centre dedicated entirely to the advancement and reporting of innovations in technology and education (CERTonline, 2007; Higher College of Technology, 2006).

2.10 Continuing Education

The HCT initially established somewhat clear guidelines in the form of a mission statement outlining the expectation and challenge which essentially every graduate would be prepared to operate, in English, in the global economy, and take part in the continued development of the UAE (Nicks-McCaleb, 2005). Caldwell (2003a, p. 16) maintains that: "*All students in every setting should be literate and numerate and should acquire a capacity for life-long learning, leading to success and satisfaction as good citizens and productive workers in a knowledge economy.*" This statement ties up with the HCT's mission statement, and would not be out of place in any educational institution (Luca et al., 2001; McLoughlin, 2001). Nonetheless, initiatives introduced to ensure that students are aware of the need to become lifelong learners in an attempt to accomplish their goals and country's goals, are often less common than it is anticipated (Nicks-McCaleb, 2005).

The mission of Continuing Education at the HCT is the promotion of investment in people, provision of lifelong learning, training and educational resources through flexible, high-quality, market-responsive opportunities which satisfy corporate, personal and professional development needs.

In spring 2000, the Continuing Education and Contract Training initiative of the HCT started. HCT staff apply their skills and industry expertise to respond to the training needs of individuals and also larger groups from government and industry. They are important elements in developing a workforce of both UAE citizens as well as expatriates.

CHAPTER THREE
LITERATURE REVIEW

3.1 Introduction

The applicability of quality in the educational sector has been the interest of a number of theorists and researchers, a few examples include works undertaken by Sherr and Lozier (1991), Brigham (1993), Edwell (1993), Tribus (1994), Badri et al. (2006), Becket and Brookes (2006), Mizikaci (2006), Amaral, (2007), Ruben et al. (2007), Stensaker (2007), Doherty (2008) and Lim (2008). Sahney et al. (2006) contend that educational institutions are recognised as organisations that are designed to transform teaching, curriculum, organisational and management process in such a way that it serves customers and stakeholders' interests.

This chapter provides an overview of the literature relating to quality and other topics relating to the concept of quality such as quality assurance and service quality. It offers an in-depth review of the fundamentals of quality as introduced by the quality gurus, including, Edward W. Deming, Joseph M. Juran, Philip Crosby, and Genichi Taguchi. Quality models such as the Malcolm Baldrige National Quality Program, the Deming Prize, and the European Foundation for Quality Management (EFQM) Business Excellence Model will be reviewed and discussed in some detail in the following chapter.

3.2 The Meaning of Quality

3.2.1 General Definition

Quality, given the wide range of meanings and implications attached to it, is a difficult and subtle term to define, having therefore been described as 'elusive' (Neave, 1986), and 'slippery' and 'value-laden' (Harvey and Green 1993). According to Sahney *et al.* (2004), the concept is slippery because it has a wide variety of meanings. This particular

perception of the term has resulted in proposing a variety of definitions, none of which is commonly accepted. Quality has been defined with different views and orientations, according to the author, the inclination applied and the context within which it is contemplated (Sahney et al., 2004). Reeves and Bednar (1994) draw attention to the fact that there is not a single definition of quality that fits every situation in relation to measurement, generalisability, usefulness to management, and relevance to customers. It is imperative noting that quality is a multidimensional concept; a definition depending fundamentally on the tendency of the individual concerned (Reeves and Bednar, 1994). Quality is dimensional in higher education given that it reflects the interests of various spheres or stakeholders (Campbell and Rozsnyai, 2002), including management, academic staff, administrative staff, and students.

A search for the definition of quality has yielded incoherent answers (Reeves and Bednar, 1994). Quality has been differently defined by various authors as: *value* (Feigenbaum, 1983), *conformance to specifications* (Gilmore, 1974; Levitt, 1972), *conformance to requirements* (Crosby, 1979), *fitness for use* (Juran, 1974, 1988), *loss avoidance* (Taguchi *et al.*, 1989), and *meeting and/or exceeding customers' expectations* (Grönroos, 1983; Parasuraman et al., 1985). Reeves and Bednar (1994) contended that notwithstanding the time period or perspective in which quality is considered, the concept has had many and often mixed-up definitions and has been utilised to illustrate diverse phenomena.

The British Standards Institute, BS 4778's defines quality as "*the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.*" The James Cook University (2002) seem to have adopted this definition in their Quality Assurance System, maintaining that:

> "'*Quality' defined in this sense suggests that the quality of teaching and learning intersects with most practices of the University. The University formulates its purposes to address what it sees as community needs. Educational programs are devised and implemented to meet these purposes and one aspect of their quality may be described as their 'fitness for purpose'. In other words, the University must be clear about its purposes and have a 'teaching and learning plan' to provide the points of reference by which the quality of its activities can be*

judged."
(http://www.jcu.edu.au/asd/quality/Idea_of_Quality_Assurance_System.htm).

Based on the different definitions of quality provided earlier, the author defines quality in the context of higher education in general and in the context of the HCT as follows:

> *Quality is the successful achievement of skills, knowledge, attitudes and capabilities by staff and students via the development of suitable management, instructing and learning through development, training, certification and accreditation using the most recent developments in human resource development.*

3.2.2 Definition of Quality in Higher Education

Due to the mounting interest in quality systems, as instruments of accreditation and accountability in higher education, concepts and approaches to quality have been reviewed in a number of perspectives of national and international interests (Mizikaci, 2006).

Watty (2001) indicates that quality is an overused and vague term, maintaining that the literature relating to this issue clearly illustrates the fact that quality has been referred to in various ways and defined differently, quoting various authors' approaches to defining quality in higher education, for example, Becher (1999): a creature of political fashion, Gibson (1986): a term notoriously elusive of prescription, Taylor *et al.* (1998): a contentious concept, and Harvey and Green (1993): a slippery concept. Other authors also define quality in higher education in many different ways, such as: excellence in education (Peters and Waterman, 1982), value addition in education (Feigenbaum, 1951), fitness for purpose (Reynolds, 1986; Tang and Zairi, 1998), fitness of educational outcome and experience of use (Juran and Gryna, 1988), conformance of education output to planned goals, specifications and requirements (Gilmore, 1974; Crosby, 1979), defect avoidance in education process (Crosby, 1979), and meeting or exceeding customer's expectations of education (Parasuraman *et al.*, 1985).

Becket and Brookes (2006) argue that quality has proved to be a challenging task. For example, Cheng and Tam (1997, p. 23) have suggested that "*education quality is a rather vague and controversial concept*" and Pounder (1999, p. 156) argues that quality is a "*notoriously ambiguous term*". The literature also indicates that the concept of quality when applied to higher education has not been conclusive, (e.g., Williams, 1990; Staropoli, 1992; Liaison Committee of Rectors' Conferences, 1993; Cheng and Tam, 1997). Sahney et al. (2006) concluded that quality in education is a multiple concept that has changing conceptualisations. They added that this causes problems in the formulation of a particular, wide-ranging definition. Quality is also reported to include within its scope the *quality of inputs* represented by students, faculty, support staff and infrastructure, the *quality of processes* in terms of learning and teaching activity, as well as the *quality of outputs*, in terms of open-minded students which exit the system. According to Sahney et al. (2006), this is all filters through and embraces the various aspects of academic life.

3.2.3 Conceptualisation of Quality in Higher Education

In reviewing various definitions of quality, Reeves and Bednar (1994) identified four main conceptualisations, namely, excellence, value for money, conformance to specifications, and meeting/exceeding expectations, and their list is by no means exhaustive. In this perspective, Campbell and Rozsnayi (2002), argue that the concept of quality has been identified in a number of ways, including the following, as summed up by Mizikaci (2006, p. 38):

- *Quality as excellence. This definition is recognised as the established academic point of view that holds as its goal to be the best.* Excellence means achieving the highest levels of organisational quality. Excellence involves differentiation and competition and HE institution strive to differentiate in terms of programmes and courses they offer and also operate in a highly competitive global market. The HCT have differentiating themselves from other UAE higher education institutions by offering a very large number of high quality applied programmes and courses that are not offered by other UAE higher education institutions and in the mean time have successfully competed against others and attracted a vast number of students.

- *Quality as zero error. This is defined most easily in mass industry in which product specifications can be established in detail, and standardised measurements of uniform products can demonstrate conformity to them. Since the products of higher education, the graduates, are not expected to be identical, this view is not always perceived to be applicable to higher education.* Students have different talents and intelligence; hence, they achieve different levels of attainment, from failure to highest levels of success.

- *Quality as fitness for purposes. This approach demands that the product or service has conformity with customer needs, requirements, or desires.* Students expect to receive the highest quality teaching and instructing materials, both theory and practice, that suit their requirements of the courses and programmes they attend. They also expect that courses and programmes fit the purposes for which they have enrolled in them.

- *Quality as transformation. This concept centres resolutely on the learners: the better the higher education institution, the more it achieves the goal of empowering students with specific skills, knowledge and attitudes that enable them to live and work in the knowledge society.* This concept converges resolutely on students, in that the better the HE institution, the more it realises the goal of empowering students with particular knowledge, skills and attitudes (KSAs) that allow them to live and work in the knowledge society (Campbell and Rozsnyai, 2002). Higher education in the UAE has expanded in recent years and HE institutions have been accredited by international bodies and offer quality programmes to students.

- *Quality as threshold. Defining a threshold for quality means setting specific norms and criteria. Any institution which attains such norms and criteria is considered to be of quality.* This concept refers to attaining the maximum limits for delivering high quality courses and programmes to students.

- *Quality as value for money. The notion of accountability is central to this definition of quality with accountability being based on the need for restraint in public expenditure.* Value for money assesses the quality of provision, processes or outcomes against the financial cost of making the provision, commencing the process or accomplishing results.

- *Quality as enhancement or improvement. This concept emphasises the pursuit of continuous improvement and is predicated on the idea that achieving quality is central to the academic ethos and that it is academics themselves who know best what quality is at any point in time.* This concept indicates that HE institutions need to improve the performance continuously in order to provide students with high quality learning process. HE institutions assume continuous improvement by means of various implementation strategies such as Baldrige methodology (Education Criteria for Performance Excellence), European Foundation for Quality Management (EFQM) Model of Excellence, and other strategies such as accreditation, student

learning assessment, and other strategies. The HCT have their Program Quality Assurance (PQA) which endeavours to pursue continuous improvement to achieve high quality educational status.

The multidimensional nature of quality has been discussed by Garvin (1984, 1987, 1988), who defines a quality system of five bases and eight dimensions regarding product quality. The five bases include: *transcendent*, *product-based*, *user-based*, *manufacturing-based*, and *value-based*. It is imperative to note that these five bases apply to product quality. Service quality will be addressed in the following section. The five different approaches are explained as follows (Garvin, 1984; 1988):

1. **Transcendent.** Quality is synonymous with 'innate excellence', absolute and universally recognisable, timeless and enduring, an un-analysable property, which can be learned to be recognised through experience. In this approach, quality is hard to define since it is identified only by means of experience.

2. **Product-based.** Quality reflects differences in the quantity of some ingredient or attribute possessed by a product. Product-based definitions distinguish quality as an intrinsic and quantifiable aspect.

3. **User-based**. The products that best satisfy customers' preferences and different needs are those with the highest quality. User-based definitions centre on customer inclinations, an in this approach, products which meet customer needs are of premier quality.

4. **Manufacturing-based**. Focus is on the supply side; quality is primarily concerned with engineering and manufacturing practices and fulfilling tolerances. Manufacturing-based definitions highlight the supply aspect and are mostly related to "*conforming to requirements*" (Garvin, 1984, p. 28). Such requirements are frequently the consequence of customer inclinations.

5. **Value-based**. Quality is about costs and price, a product with high quality provides performance or conformance at an acceptable price or cost. This approach explains quality as performance at an adequate cost.

Garvin (1984, 1988) also alludes to the disadvantages with each approach, maintaining that organisations employing only one approach might encounter quality problems, suggesting that organisations need to use multiple perspectives on quality and actively move between different approaches. However, Garvin's work does not adequately account for the service area (Gummesson, 1991). Furthermore, Gummesson maintains that Garvin's five approaches show that quality is a complex and indistinct concept and that the user-based approach is the approach often employed within the service management areas. However, Garvin's five approaches have been modified and applied to studies of quality in education (for example, Gilbert et al., 1993; Schwartz and Peterson, 1993; Seymour, 1993, Miller and Shih, 1998; Miller and Pilcher, 1999; Goldberg and Cole, 2002; Chua, 2004; Paewai, 2005). For example, concerning course quality, transcendent approach includes items such as course projection of institution image and reputation of high quality, and course quality as being acceptable to the community; user-based approach reflects students' perception of course quality, and whether the quality of courses has meet their needs; manufacturing-based approach can be implemented in terms of staff knowledge, availability to assist students, providing recent information to students, assuming responsibility for students' learning, etc.; and value-based approach is modified to investigate issues relating to whether courses offered are effective, students received quality teaching and tutoring, whether students' learning is useful in the long-term, etc. In terms of product-based approach, it can be modified to represent service-based approach given that education is a service in nature, and quality in this case reflects differences in the performance of the various students.

The eight dimensions of quality are (Bhatt and Raj, 2006, p. 10):

1. ***Performance****: a product/service's primary operating characteristics.*

2. ***Features****: add-ons or supplements.*

3. ***Reliability**: a probability of not malfunctioning or breaking down for a specified period of time.*
4. ***Conformance**: the degree to which a product's design and operating characteristics meet established standards.*
5. ***Durability**: a measure of a product's life.*
6. ***Serviceability**: the speed and ease of repair.*
7. ***Aesthetics**: a product's look, feel, taste, and smell.*
8. ***Perceived quality**: quality as viewed by a customer, client or student.*

Bhatt and Raj (2006) have reported a long list of definition of quality by many authors, and classified all the definitions and statements they listed into three quality categories, referring to them as Q1, Q2 and Q3 category statements (pp. 6-8). They indicated that the Q1 category statements (p. 7) are "*value-added definitions, Mission Statements, State of Mind Concepts, Proverbs, etc*." They criticised this category as being actually half-reality based and half feel-good. The Q2 category statements consist of customer and market-based definitions, fitness for use and need and attitude satisfaction concepts. Bhatt and Raj (2006) argue that this category includes all definitions that can be mapped into real user and market measures, with which to 'validate' that the correct product is designed. The Q3 category statements are operations-based definitions, for example, engineering, manufacturing and service – and conformance to specifications and quality of design requirements (Bhatt and Raj, 2006).

The eight dimensions reported earlier are not all applicable to education. For example, features, durability, serviceability, and aesthetics cannot be modified to suit educational context. The remaining four dimensions can be modified and applied within this context. For example, performance dimension can be applied to the achievements of staff and students, reliability dimension can be applied to the reliability of the courses and programmes offered to students, conformance dimension can be applied to course and programme designs and whether such courses and programmes meet established standards, and perceived quality dimension can be applied to quality of courses and programmes as perceived by the students.

3.3 Service Quality

Shahin (2005) reports that although there had been many efforts to investigate service quality, yet no general consensus on the measurement of the concept exists. Due to the fact that education is a service in its nature, it is imperative to address the issue of service quality in some detail. It is also important at this stage to define the term 'service'. Grönroos (1990, p. 27) suggests the following definition:

> *"A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employees and/or physical resources or goods and/or systems of the service providers, which are provided as solutions to customer problems."*

Service quality is a concept which has produced extensive interest and discussion in the research literature owing to the difficulties in both defining it and measuring it with no overall agreement emerging on either (Wisniewski, 2001).

Baron and Harris (2003, p. 136) maintain that service quality has been identified as the "*single most researched area in services marketing to date*." Quality, for the service-based organisations, is the lifeblood that brings increased investment, competitive advantage and long term profitability (Clow and Vorheis, 1993).

Definitions of service quality are in the main based upon the idea that it is the result of a comparison which customers tend to make, through identifying their perceptions of how services are performed in comparison to their expectations (Grönroos, 1984, 2000; Parasuraman et al., 1988).

There are several definitions as to what service quality denotes. One commonly used definition refers to service quality as the extent to which a service meets customers' needs or expectations (Lewis and Mitchell, 1990; Dotchin and Oakland, 1994; Asubonteng et al., 1996; Wisniewski and Donnelly, 1996). In his discussion of Parasuraman et al.'s (1985) and Lewis and Mitchell's (1990) works, Shahin (2005, p. 2)

indicated that service quality is "*the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs.*" Service quality is also defined as co-productive, intangible and a non-repetitive experience (Tenner and De Torro, 1992). Djebrani et al. (in press) believe that such encounters become personal experiences and require expectations and aspirations to be met in order for the relationship to continue. Kotler (2000), on the other hand, contends that customers tend to buy what they believe to be the highest customer delivered value, and identified this as the difference between total customer value (benefits customer expect) and total customer cost. He believes that customer satisfaction is maximised if customer value is high, placing an emphasis on costs as a key element that influences the customer perception of the service. To this effect, researchers have demonstrated that marketers have realised that they should provide a high quality of service so that they can retain customers as well as to survive and grow (Dabholker et al., 2000).

Parasuraman *et al.* (1988) define service quality from customers' perspective as the extent of discrepancy between customers' expectations or needs, and their perceptions, and identified a number of factors that influence customers' expectations. Factors that are valid to implement for higher education include: word-of-mouth communications [that is, experience of past students or academic staff], reputation of the higher institution concerned, and the quality of programmes and courses offered to students by that institution.

Service quality can be measured by how well the service delivery matches a customer's expectation (Weekes et al., 1996). The key to service quality, according to Bojanic (1991), is consistently meeting or exceeding client expectations. Weekes *et al.* (1996) maintain that the perceived service quality is the difference between expectations and the services delivered – the "perception gap". Perceived service quality is the product of the consumer's comparison of expected service with perceived service (Parasuraman et al., 1985). These authors add that it is possible that the relative significance of the ten determinants in shaping customer expectations (before service delivery) may differ from

their relative significance in comparison with customer perceptions of the delivered service. Nonetheless, the general comparison of expectations, according to Parasuraman et al. (1985), with perceptions were suggested in past research on service quality (Grönroos, 1982; Lehtinen and Lehtinen, 1982).

Weekes et al. (1996) indicated that the underlying direction in research on measuring service quality appears to have been spearheaded by Parasuraman et al. (1985) with their application of the "gap analysis" in the provision of services, and proposition of the five gaps. They maintained that the most important insight from analysing the executive responses is the following: A set of key discrepancies or gaps exists regarding executive perceptions of service quality and the tasks associated with service delivery to consumers. These gaps can be major hurdles in attempting to deliver a service that consumers would perceive as being of high quality (Parasuraman et al., 1985).

3.3.1 Models of Service Quality Measurement

In terms of measuring and conceptualising service quality, there are some important service quality models which have been proposed and explained in the relevant literature. Some of these models are discussed in the following four sections.

3.3.1.1 SERVQUAL

Most of the work until present (for example, Chaston, 1994; Reynoso and Moore, 1995; Edvardsson et al., 1997; Brooks et al., 1999; Sahney et al., 2004) has attempted to employ the SERVQUAL methodology in an attempt to measure service quality. Parasuraman et al.'s (1985, pp. 44-48) service quality model consists of five gaps, as illustrated in Figure 3.1:

GAP 1: Consumer expectation-management perception gap.

GAP 2. Management perception-service quality specifications gap.

Gap 3. Service quality specification-service delivery gap.

Gap 4. Service delivery-external communications gap.

Gap 5. Expected service-perceived service gap.

The five-gap model has been extended to identify seven major discrepancies or gaps, as illustrated in Figure 3.2. The seven gaps, as perceived by Shahin (2005, p. 2), are:

- "***Gap1: Customers' expectations versus management perceptions:*** *as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management.*
- ***Gap2: Management perceptions versus service specifications:*** *as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardisation and an absence of goal setting.*
- ***Gap3: Service specifications versus service delivery:*** *as a result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control systems, lack of perceived control and lack of teamwork.*
- ***Gap4: Service delivery versus external communication:*** *as a result of inadequate horizontal communications and propensity to over-promise.*
- ***Gap5: The discrepancy between customer expectations and their perceptions of the service delivered:*** *as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In this case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.*
- ***Gap6: The discrepancy between customer expectations and employees' perceptions:*** *as a result of the differences in the understanding of customer expectations by front-line service providers.*
- ***Gap7: The discrepancy between employee's perceptions and management perceptions:*** *as a result of the differences in the understanding of customer expectations between managers and service providers.*"

The three important gaps that are more associated with the external customers are Gaps 1, 5 and 6; owing to their direct relationship with customers (Curry, 1999; Luk and Layton, 2002).

Figure 3.1. Service Quality Model (Parasuraman et al., 1985, p. 44).
[Dotted lines indicate the five gaps].

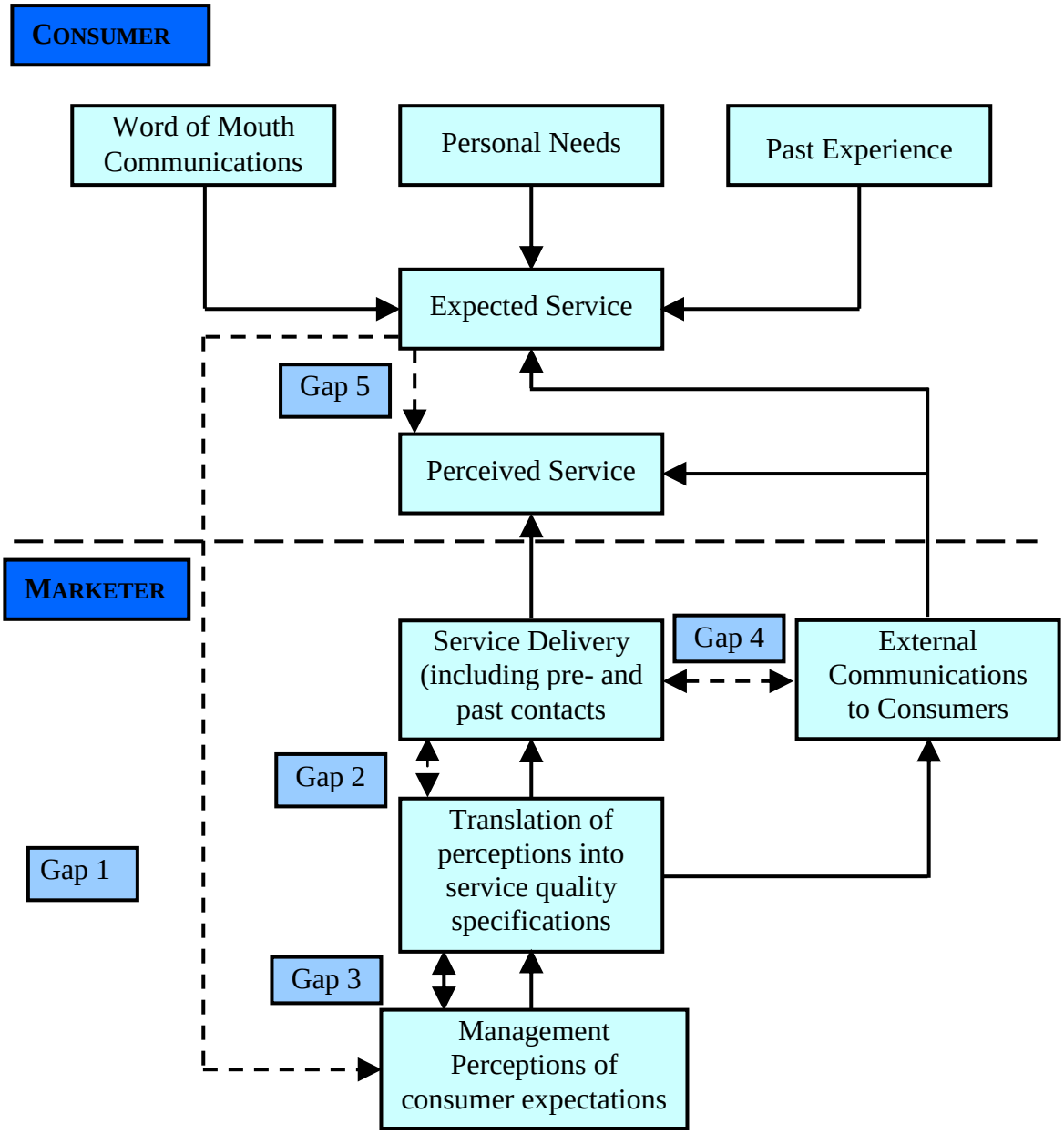
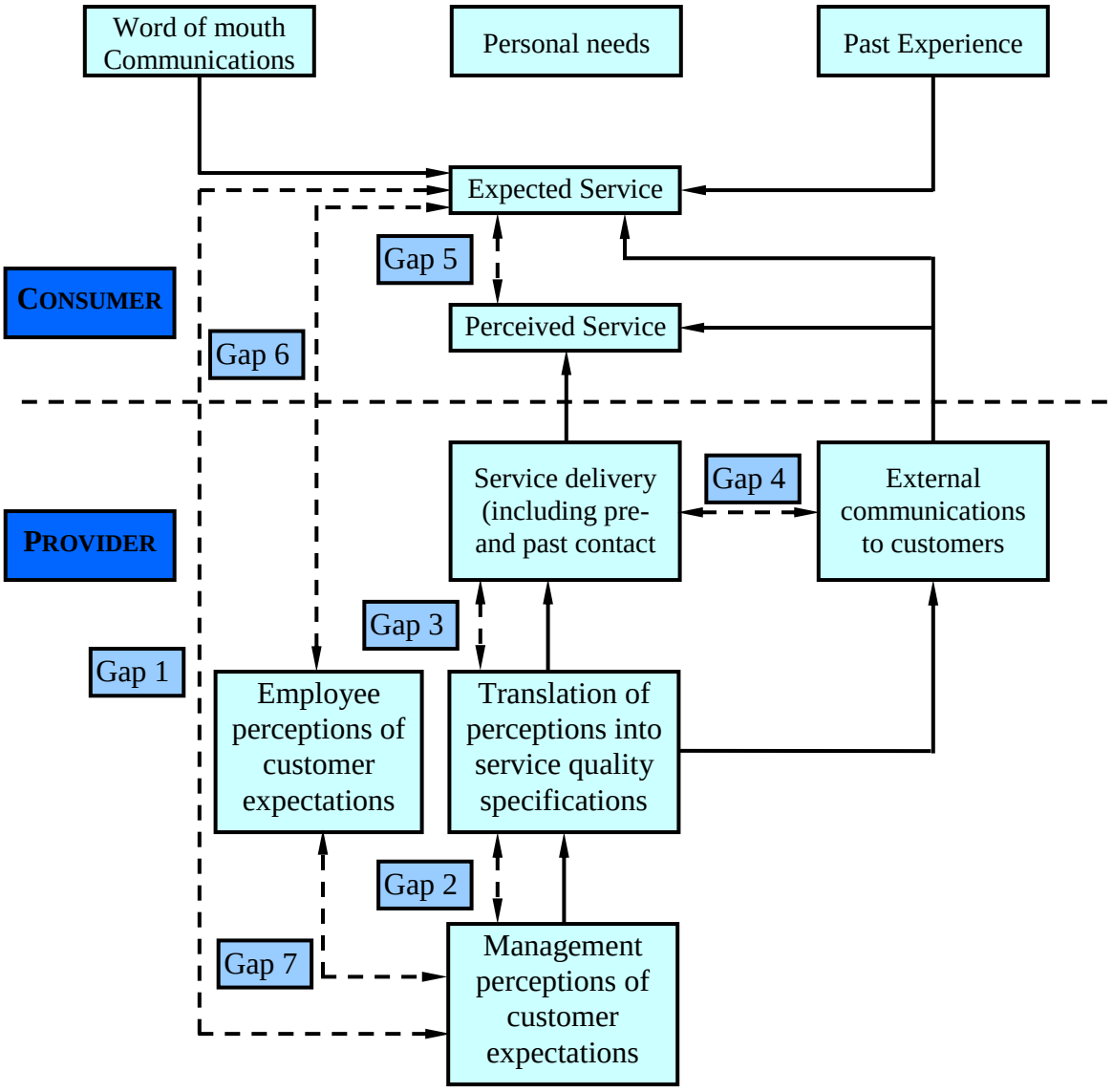


Figure 3.2. Model of Service Quality Gaps (Shahin, 2005, p. 3).



Parasuraman et al. (1988) introduced a 22-item scale, referred to as "SERVQUAL", also termed the 'American' perspective, for measuring service quality. Since then, this model has been widely adopted across industries (Oh, 1999). The SERVQUAL concept has been reported to have dominated the literature (Brady and Cronin, 2001) and is perceived as the pioneering work in service quality research (Taylor and Cronin, 1994) which influences the majority of the subsequent research (Nitecki, 1996). This model has been employed as a diagnostic instrument for the measurement of service quality (Kettinger and Lee, 1997; Nitecki, 1996), and also as a benchmarking or prescriptive instrument (Kettinger, 1997). SERVQUAL also involves evaluations of the process of service delivery, not only on the outcome of a service.

The basic idea of the SERVQUAL Model is that when the gaps, explained earlier (see Figures 3.1 and 3.2), exist, quality is then at stake and the strategy should be to narrow or close the gaps (Weekes et al, 1996). Gummerson (1989) indicates that it is a matter of delivering what the customer perceives as reasonable to expectations. Teas (1993) indicates that the SERVQUAL Model is based on the principle that GAP 5, referred to before (Figure 3.1), is a result of the other four gaps. Based on the application of this perception gap theory, Parasuraman et al. (1985, p. 49) identified ten determinants of service quality, as follows:

1. **Reliability** involves consistency of performance and dependability.

2. **Responsiveness** concerns the willingness or readiness of employees to provide service.

3. **Competence** means possession of the required skills and knowledge to perform the service.

4. **Access** involves approachability and ease of contact.

5. **Courtesy** involves politeness, respect, consideration, and friendliness of contact personnel (including receptionists, telephone operators, etc.).

6. **Communication** means keeping customers informed in language they understand and listening to them.

7. **Credibility** involves trustworthiness, believability, honesty. It involves having the customer's best interests at heart.

8. **Security** is the freedom from danger, risk, or doubt

9. **Understanding/Knowing the Customer** involves making the effort to understand the customer's need.

10. **Tangibles** include the physical evidence of the service: physical facilities; appearance of personnel; tools or equipment used to provide the service; physical representation of the service (Parasuraman et al., 1985, p. 47).

These determinants, however, were refined and later developed into the quality measurement model, SERVQUAL (Parasuraman et al., 1988). The SERVQUAL model is illustrated in Figure 3.3. The five dimensions which are a consolidation of the ten determinants, indicated earlier, are:

1. **Tangibles.** These are the same reported by Parasuraman et al. (1985), consisting of the same elements, for example, physical evidence of the service: physical facilities; the appearance of personnel; etc.

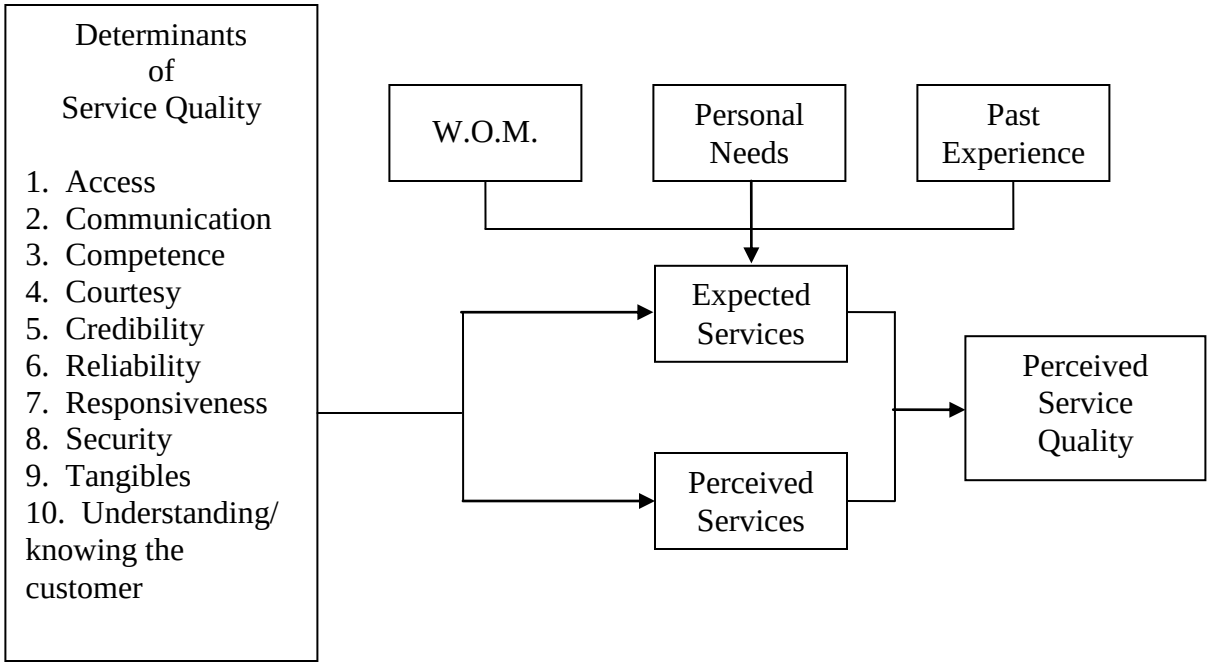
2. **Reliability**, which consists of the same determinants of reliability mentioned in the ten determinants, including the ability to perform services accurately.

3. **Responsiveness** involves willingness to help customers and provide quick and prompt service.

4. **Assurance**. Assurance is the consolidation of four determinants: competence, courtesy, credibility, and security.

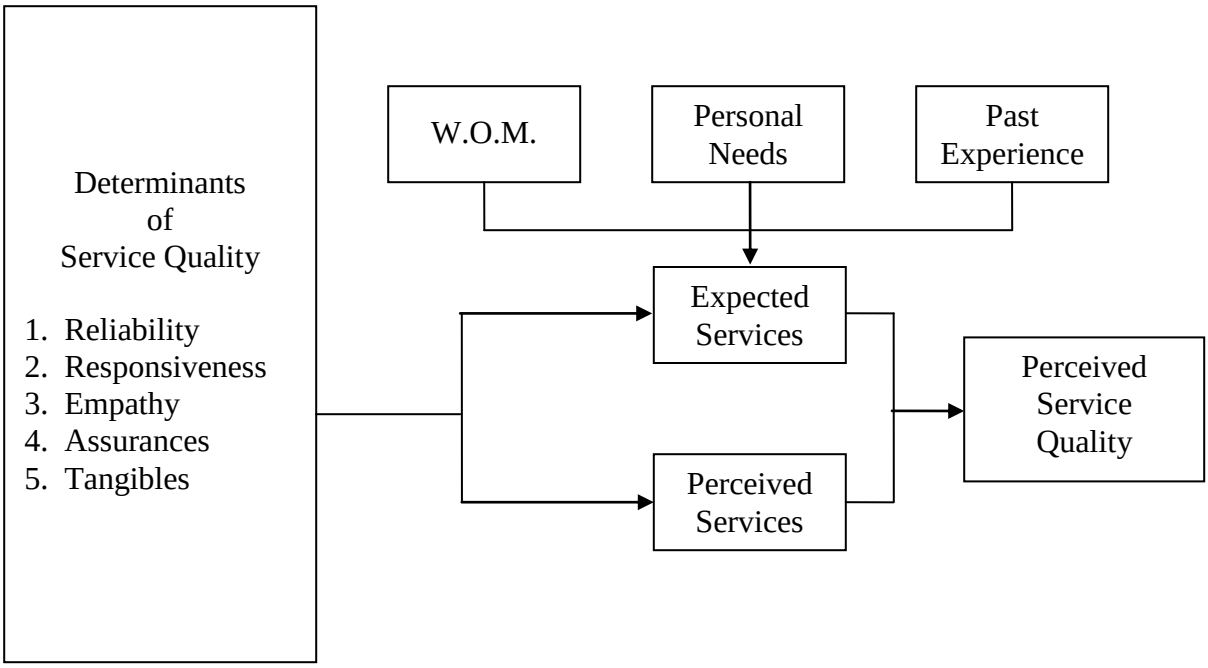
5. **Empathy**, a consolidation of three determinants: access, communication and understanding.

Figure 3.3. The SERVQUAL Model (Parasuraman et al., 1985, p. 48).



Hence, the SERVQUAL Model, based on Parasuraman et al. (1988) development of the model, can be represented as follows (Figure 3.4):

Figure 3.4. The modified SERVQUAL Model



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Hepworth (1992), who published a brief discussion on models of service quality and referred to Parasuraman et al. (1985) model and its original ten determinants of service quality, traced the evolution of the model through to its replacement by the five determinants that make up Parasuraman et al's. (1988) SERVQUAL instrument. Hepworth (1992), however, commented that he does not only prefer the original ten determinant model but that the ten determinants only provide a generic base for the addition of further case specific dimensions. He concludes that the generic model is inadequate without the addition of these further dimensions. However, Hepworth's comments and discussion, according to Weekes et al. (1996), are general as he does not detail the extent of research performed to support this position.

Despite the popularity of the SERVQUAL model, the model has been the subject of various criticisms. For example, Buttle (1996) maintains that it has been subjected to a number of theoretical and operational criticisms. Theoretical criticisms include paradigmatic objections, such as it is based on a disconfirmation paradigm [according to

which, service quality is a comparison between consumers' expectations and their perceptions of service actually received (Chang et al., 2002)] not on an attitudinal paradigm, its failure to utilise established economic, statistical and psychological theory; there is little evidence that customers assess service quality in terms of perception minus expectation (P – E) gaps; its focus on the process of service delivery, not the outcomes of the service encounter; and non-universality of its five dimensions (Buttle, 1996). Operational criticisms are that SERVQUAL fails to measure absolute service quality expectations; some items cannot capture the variability within each service quality dimension; customers' assessments of service quality may vary from moment of truth to another moment of truth; reversal of polarity of items in the scale causes respondent error; and the seven-point Likert scale is flawed, etc. (Buttle, 1996). Cronin and Taylor (1994) criticised SERVQUAL, arguing that the use of an expectation disconfirmation model as the basis for this model is not inappropriate, maintaining that an attitudinal model of service quality should be employed.

However, despite the criticisms of the SERVQUAL, Parasuraman et al. (1994) reported that using performance-only, that is, applying SERVPERF (discussed later in this chapter) against the SERVQUAL, that is, expectation/performance difference scale must be governed by whether the scale is employed for a diagnostic purpose or for create theoretically sound models. Carrillat et al. (2007) argue that the SERVQUAL scale would have greater interest for practitioners as a result of its richer diagnostic value. Furthermore, Parasuraman et al. (1994) also indicated that by comparing customer expectations of service against perceived service across dimensions, management can identify service underperformance and utilise such information to allocate resources to improve service quality.

Furthermore, Quester and Romaniuk (1997) argue that it is sufficient to regard SERVQUAL as being superior to SERVPERF (explained later in this chapter) as a measure of perceived service quality since its measurement scale follows a more scientific approach to scale development as well as it is possibly more resolutely based on the literature than is the SERVPERF scale. They concluded that SERVQUAL is to

be said to be potentially a superior measure of perceived service quality from a practical perspective.

The application of the SERVQUAL in educational context has been reported to be a good measure for service quality. For example, very recently, Stodnick and Rogers (2008) have indicated that their findings suggest that the SERVQUAL scale is consistent and demonstrates both convergent and divergent validity, and performed better than a traditional student evaluation scale, such as the Brightman scale. They also found that this model shows predictive validity due to a significant positive relationship between its individual dimensions and two measures of student satisfaction as well as student learning.

3.3.1.2 The Perceived Service Quality Model

Grönroos's (1984) work, entitled "*Perceived Service Quality Model*", can be perceived as the precursor to the conceptualisation of service quality by the introduction of the traditional disconfirmation approach. This model is supposed to boost the conception of consumers' service quality perceptions and how and which factors affect these perceptions (Mangold and Babakus, 1990).

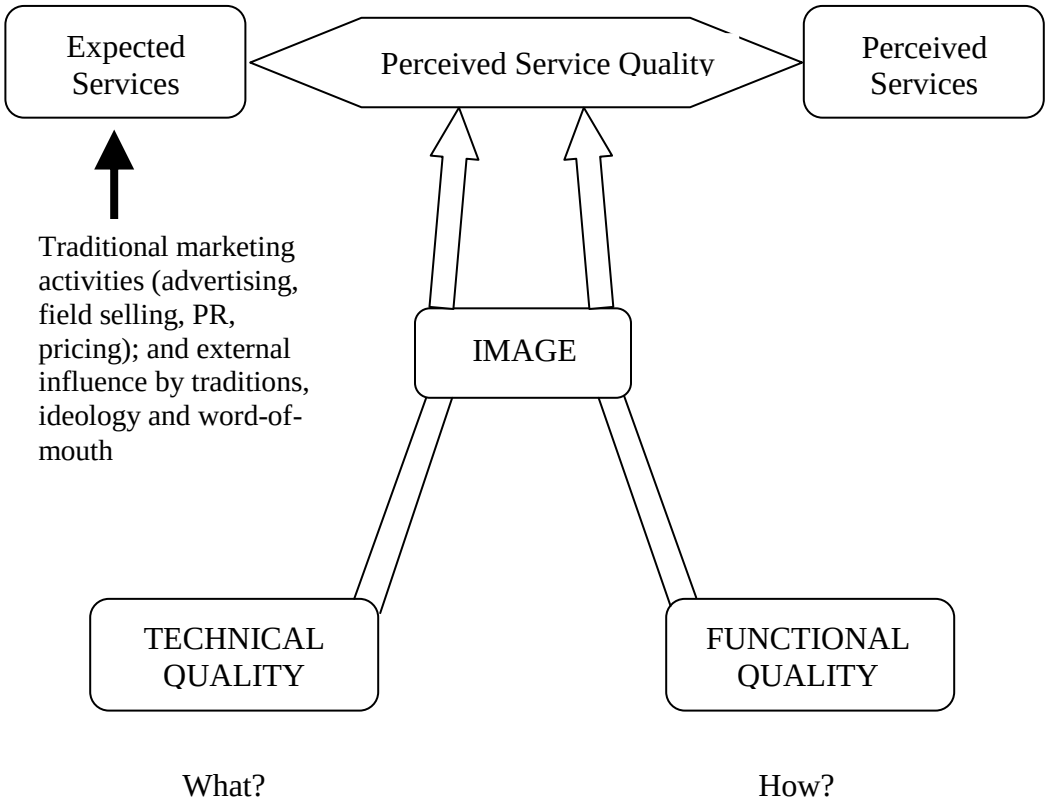
This 'Nordic' perspective, as referred to by Brady and Cronin (2001), indicates that service quality perceived through the customer is a comparison between his/her expectations and actual performance (Grönroos, 1984). This implies that while performance increases, compared to expectations, customer satisfaction also increases (Swan and Bowers, 1998).

In this perspective, dimensions of service quality are defined in global terms as comprising functional and technical quality, and management is mainly by means of "internal marketing" of a pro-customer service culture to the employees of the service firm. However, Grönroos (2001) changed the terms used in technical and functional features of services instead of the out of date quality dimensions, and incorporated the

image component in his service quality model, and introduced dynamic aspects due to the continuous customer encounters.

Grönroos (1984) indicated that in some cases, functional quality (customer-supplier interaction) is more important; even suggesting that temporary problems with the technical quality are tolerated if the functional quality is good enough. Grönroos also explains that the gap between the expected and perceived service must be as small as possible. To promote this, traditional marketing activities, such as, advertising, field selling and pricing communicated by word-of-mouth are helpful. Nonetheless, the management of a service organisation must understand the significance of the functional quality and the technical quality (Grönroos, 1984). Grönroos' (1984) 'Nordic' model is illustrated in Figure 3.5.

Figure 3.5. The 'Nordic' Model (Grönroos, 1984, p. 40)



3.3.1.3 Further Service Quality Models

There are also other service quality models, though none of them has really been established as a tool for the measurement of service quality. For example, Cronin and Taylor (1992) introduced a service performance model, referred to as SERVPERF. The SERVPERF scale can be considered as a variant of SERVQUAL and includes perceived performance component (Jain and Gupta, 2004). In an equation form, it can be expressed as follows (Vanniarajan and Anbazhagan, 2007, p. 726):

$$SQ_i = \sum_{j=1}^{k} P_{ij}$$

Where:

SQi = perceived service quality of individual 'i'.

k = Number of attributes / items

P = Perception of individual 'i' with respect to performance of a service firm on attribute 'j'.

The SERVPERF scale can be viewed as the unweighted perceptions elements of SERVQUAL and comprises 22 perception items; hence, it excludes any weight of expectations.

Rust and Oliver (1994) offer a three-component model; the service product (technical quality), the service delivery (functional quality), and the service environment. This model was conceived to facilitate combining existing research trends with service quality and establishing of efficient and new model. It focuses on the relationships between service quality, service value and satisfaction and service environment. This model uses the previous model introduced by Grönroos (1982) and Bitner (1992). The

model suggests that service quality comprises three distinctive components: service product, that is, the outcome and the customer's perception of the service; service delivery, the consumption process and any relevant events which take place during the service act; and service environment, that is, the internal and external atmosphere (Jones, 2005). The service environment is significant given that it is perceived as an integral role in customer service perception development (Bitner, 1992). However, Rust and Oliver (1994) did not test their conceptualisation, although support has been found for similar models in retail banking (McDougall and Levesque 1994) and health care samples (McAlexander et al., 1994).

Dabholkar et al. (1996) identify and test a hierarchical conceptualisation of retail service quality which suggests three levels: customers' overall perceptions of service quality; primary dimensions; and subdimensions. According to Brady and Cronin (2001, p. 35), this multilevel model recognises the various aspects and dimensions of service quality perceptions.

3.4 Quality Assurance in Higher Education

Recent literature (e.g., Harman, 2000) indicates that higher education institutions worldwide are paying special attention to designing and implementing new quality assurance mechanisms and systems so as to guarantee that students receive high quality and appropriate education and that their degrees are widely recognised. This recognition is perceived to be vital by national governments and employers as well as by other universities and employers globally (Harman, 2000).

Owing to the diversity in perceptions concerning quality and higher education, a number of systems and approaches have been developed for monitoring quality of different types and at different levels, displaying diverse emphases and priorities, including quality control, quality assurance, quality audit, quality assessment and indicator systems (Tam, 2001).

Quality assurance is a prevention-based system that improves product and service quality as well as it increases productivity by focusing the emphasis on product, service and process design (Dale, 1999). Quality assurance has been defined in various ways. For example, it is defined as mechanisms or procedures adopted to assure a given quality or the continued improvement of quality (Piper, 1993).

The International Standards Organization (1994) defines quality assurance (ISO8402) as follows: "*All the planned and systematic activities are implemented within the quality system that can be demonstrated to provide confidence that a product or service will fulfill requirements for quality.*" The Higher Education Quality Council (HEQC) (1994, p. 61) reported a similar definition, describing quality assurance as: "*All those planned and systematic activities to provide adequate confidence that a product or service will satisfy given requirements for quality*."

Tam (2001, p. 49) refers to quality assurance as: "*a system based on the premise that everyone in an organisation has a responsibility for monitoring and enhancing the quality of the product or service.*" Tam (2001) argues that when quality assurance is put in the university context, it necessitates a whole-institution approach for an inclusive transformation to quality that involves top-level commitment, followed by significant and wide-ranging re-education of all staff. This transformation requires time, effort, and motivation of everybody in the institution to change to a culture that is quality-driven and ever-improving."

Harman (2000, p. 1) defines quality assurance, in the context of higher educations, as "systematic management and assessment procedures adopted by higher education institutions and systems in order to monitor performance against objectives, and to ensure achievement of quality outputs and quality improvements."

Nyman (2002) defines quality assurance as:

> "*A systematic pattern of actions that are constantly optimizing productivity, communication, and value within an organization in order to provide confidence*

that processes are established and continuously improved in order to produce products that meet specifications and are fit-for-use within organizational and competitive constraints."

Nyman indicates that with this definition, the "*patterns of action*" are **policies** and **procedures** and include such things as **facilitation**, **training**, **measurement**, and **analysis**. He adds that the means by which confidence is provided is by various quality measures put in place throughout the lifecycle of the product.

Tertiary Education Commission (2004, p. 8) defines quality assurance: "*as a process of systematically and continuously evaluating the provision of education or delivery of a service (teaching and learning, research and support services) with the objective of maintaining its specified standard and improving on it*." The Commission also indicated that it is the task of educational institutions to make sure that an operative quality assurance system is in place and that planned and regular quality assurance exercises are undertaken by proficient and responsible staff and that all staffs are fully informed and are involved in it.

These definitions have been suggested by various agencies and authors, each defining the term from their own perspective and understanding of the term. However, most, if not all of these definitions agree that quality assurance is systematic and planned processes or activities.

Becket and Brookes (2006) indicate that there are certain environmental forces within the UK that impose the need for effective quality management within programmes, including the following (p. 123):

- "*a growing climate of accountability;*
- *an expansion in the size of student populations;*
- *an increasingly diverse student population resulting from widening participation initiatives and targeting international markets;*

- *diminishing resources with which to deliver programmes of study;*
- *the increasingly competitive nature of higher education;*
- *greater expectations of students as paying customers;*
- *more flexible provision at both undergraduate and postgraduate level; and*
- *an increase in collaborative provision between institutions*."

Becket and Brookes (2006) maintain that these forces require that higher education programmes need to adopt quality assurance measures which are both accurate and transparent. It seems also that most of these factors apply to the HCT, especially in terms of the emergent atmosphere of accountability, expansion in the size of student populations, declining resources with which to deliver study programmes, and the highly competitive nature of higher education (as there are other UAE higher education institutions, both public and private that offer similar courses to those of the HCT, and hence compete with the latter). Accordingly, the HCT need to adopt rigorous and transparent quality assurance procedures to meet the demands imposed by such factors.

Cheng (2001, 2003a) argues that global education reforms have been experiencing three waves since the 1970s. The three waves of reforms, according to Cheng (2003a, p. 203), "*are mainly based on different paradigms and theories of education effectiveness, and they result in the employment of different strategies and approaches to changing schools and education.*" The three waves are as presented below.

3.4.1 First Wave: Internal Quality Assurance (Pre-1990s)

Cheng (2003a) maintains that the discussion of education quality in this wave conventionally focuses profoundly on the efficacy of internal education process, mainly teaching and learning. In this perspective, education quality essentially signifies the achievement of planned education goals, especially in terms of students' education results (Cheng, 2003a). In other words, the important accomplishment in planned education goals results in better quality in education. As such, education quality is not

different from education efficacy. Furthermore, quality assurance often refers to the efforts for improving the internal environment and processes in order that the efficacy of learning and teaching can be certified to accomplish the planned goals (Cheng, 1997). This, according to Cheng (2003a, p. 204): "*is "internal quality assurance"*." The models of internal quality assurance are presented in Table 3.1.

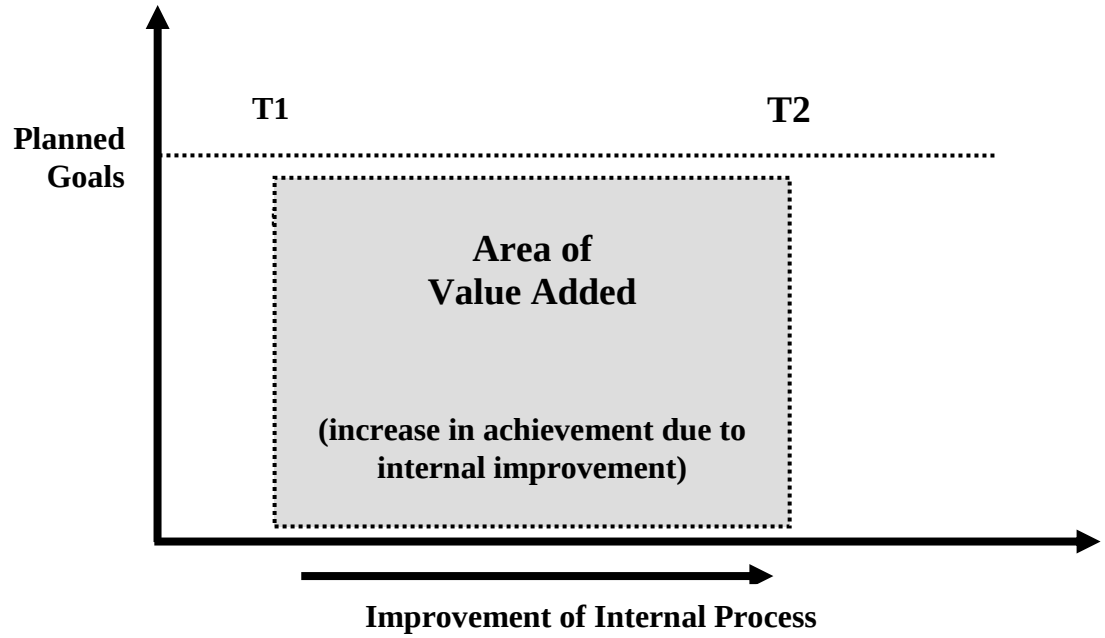
The internal quality assurance is based on the theory of value-added in education quality, presuming that the larger the improvement of internal process of teaching and learning the larger the value-added to education quality (Cheng, 2001, p. 11). Cheng illustrates this graphically (See Figure 3.6), maintaining that "*if the internal process including different components and their relationships can be improved during a time period T1 to T2, the area of value added in quality will increase as the achievement of the planned goals is increased.*"

Table 3.1. Models of internal quality assurance

	Conception of Quality Assurance	Conditions for Model Usefulness	Indicators/Key Areas for Quality Evaluation (e.g.)
Goal and Specification Model	• Ensuring achievement of stated institutional goals and conformance to given specifications	• When institutional goals and specifications are clear, consensual, time-bound, and measurable; • When resources are sufficient to achieve the goals and conform to the specifications	• Institutional objectives, standards, and specifications listed in the program plans, e.g. academic achievements, attendance rate, dropout rate, etc.
Process Model	• Ensuring smooth internal process and fruitful learning experiences	• When there is a clear relationship between process and educational outcomes	• Leadership, participation, social interactions, classroom climate, learning activities and experiences, etc.
Absence of Problems Model	• Ensuring absence of problems and troubles in the institution	• When there is no consensual criteria of quality but strategies for improvement are needed	• Absence of conflicts, dysfunctions, difficulties, defects, weaknesses, troubles, etc.

Source: Cheng (2001, p. 11).

Figure 3.6. Value-added in Quality (Source: Cheng, 2001, p. 12)



3.4.2 Second Wave: Interface Quality Assurance (The 1990s)

First wave initiatives have been performed in the past decades throughout the world to practise internal effectiveness and quality (Cheng and Townsend, 2000; Cheng 2001, 2003a). Unfortunately, the outcomes of such initiatives were rather inadequate and failed to meet the public needs and expectations (Cheng, 2003a). Cheng (2001, 2003a) argues that people started to question how effective are those improvement initiatives to satisfy various needs and expectations of parents, students, employers, policy-makers, and those concerned in the community, raising questions such as: "*How can education be ensured to be accountable to the public? How are the education practices and outcomes relevant to the changing demands of the local community?* (Cheng, 2001, p. 12; 2003a, p. 205). All such challenges relate to the interface between educational institutions and the community (Cheng, 2001, 2003a). According to Cheng (2001), this indicates that quality assurance is not an issue of internal process improvement only but the interface issue of meeting stakeholders' satisfaction and guaranteeing accountability to community as well.

Eight models of quality assurance have been reported, of which resource-input model, satisfaction model, legitimacy model, organisational learning model, and total quality management model focus mainly on the interface quality assurance regarding resource input from interface, satisfaction of strategic stakeholders, legitimacy and accountability in the local community, adaptation to the changing interface environment through continuous learning, and total management of internal people and process to satisfy the strategic stakeholders' needs (Cheng, 2001, 2003a). The characteristics of quality assurance of these models are summed up in Table 3.2.

3.4.3 Third Wave: Future Quality Assurance

Policy-makers and educators began to suspect whether reforms of the second wave can meet the challenges in a new era of rapid globalisation, IT and its long-lasting impacts,

and knowledge-based economy (Cheng, 2001, 2003a). The concern here is with how interface education quality and internal effectiveness are significant to such challenges.

Table 3.2. Models of interface quality assurance

	Conception of Quality Assurance	**Conditions for Model Usefulness**	**Indicators / Key Areas for Quality Evaluation (e.g.)**
Resource-Input Model	• Ensuring achievement of needed quality resources & inputs for the institution	• When there is a clear relationship between inputs and outputs; • When quality resources for the institution are scarce.	• Resources procured for institutional functioning, e.g. quality of student intake, facilities, financial support, etc.
Satisfaction Model	• Ensuring satisfaction of all powerful constituencies	• When the demands of the constituencies are compatible and cannot be ignored	• Satisfaction of education authorities, management board, administrators, teachers, parents, students, etc.
Legitimacy Model	• Ensuring achievement of the institution's legitimate position and reputation	• When the survival & demise among education institutions must be assessed • When the environment is very competitive and demanding	• Public relations, marketing, public image, reputation, status in the community, evidence of accountability, etc.
Organization-al Learning Model	• Ensuring adaptation to environmental changes & internal barriers • Continuous improvement	• When institutions are new or changing; • When the environmental change cannot be ignored	Awareness of external needs and changes, internal process monitoring, program evaluation, development planning, staff development, etc.
Total Quality Management Model	• Ensuring total management of interface, internal people & process with outputs meeting strategic stakeholders' needs	• The constituencies' needs are compatible; the technology & resource are available f total management	• Leadership, people management, strategic planning, process management, quality results, constituencies' satisfaction, impact on society, etc.

Source: Cheng (2001, p. 14).

Although the then current stakeholders were satisfied with the quality of educational services and educational institutions were accountable to the community, education was still unproductive or 'useless' for the new generations in the twenty-first century, if the aims, content, practices, and outcomes of education are irrelevant to the future needs and challenges. Cheng adds that in addition to internal quality and interface quality there must be education quality for the future. Cheng (2003a, p. 207) defines future education quality as: "*the relevance of education to the future needs of individuals and the community to meet the coming challenges in the new millennium.*" Cheng adds that, future quality assurance denotes the efforts for guaranteeing the bearing of aims, content, practice, and outcomes of education to the future of new generation in the new era. Many countries have started during the last years of the 1990s to review their education systems in view of future challenges and needs in the twenty-first century and started the third wave of education reforms (Cheng, 2003a). These countries pushed for a paradigm shift on learning, teaching and reforming various features of education so as to ensure the significance of education in the future (Cheng, 2003b). Regarding this paradigm shift in education, it must shift from the traditional site-bound paradigm to a new triplisation paradigm, which emphasises the development of students' conceptualised multiple intelligence (CMI), which include technological, economic, social, political, cultural and learning intelligences, and the process of tiplisation, including globalisation, localisation and individualisation, in education (Cheng, 2000a, b; 2003a). Main characteristics of the new and traditional paradigms in learning are presented in Table 3.3.

Table 3.3. Paradigm shift in learning

New triplization paradigm	**Traditional site-bound paradigm**
Individualized learning	***Reproduced learning***
Student is the centre of education	Student is the follower of teacher
Individualized programs	Standard programs
Self-learning with appropriate guidance and facilitation	Absorbing knowledge from their teachers
Self-actualizing process	Receiving process
Focus on how to learn	Focus on how to gain
self-rewarding and enjoyable	External reward and avoidance of punishment
Localized and globalized learning	***School-bound learning***
Multiple local and global sources of learning	Teacher-based learning
Networked learning	Separated learning
Lifelong and everywhere	Fixed period and within school
Unlimited opportunities	Limited opportunities
World-class learning	School-bound learning
Local and international outlook	School experiences

(Source: Cheng, 2003a, p. 209).

To sum up, the first wave of education reforms focused on internal movement and effectiveness; hence, the paradigm of quality assurance in education conceptualised education quality essentially in terms of the internal effectiveness of management, teaching as well as learning to accomplish the planned goals. The second wave of reforms and quality assurance concentrated on the interface between education institution and the community; hence, education quality is interface quality, defined and assessed largely by stakeholders' satisfaction with the education services, such as education process and outcomes. Finally, the third wave of education reforms in response to the challenges of globalisation, IT and knowledge-driven economy in the twenty-first century pushes for paradigm shift in quality assurance in education; hence, education quality is future quality, defined by education relevance to individual, community and society future needs (Cheng, 2001).

The three paradigms of quality assurance in education are summarised in Table 3.4.

Table 3.4. Three different paradigms of quality assurance in education (Source: Cheng, 2003a, p. 203).

	First Wave Paradigm	Second Wave Paradigm	Third Wave Paradigm
Conception of Education Quality	**Internal Quality:** • As education effectiveness to achieve planned goals	**Interface Quality:** • As satisfaction of stakeholder with the education services including education process and outcomes; and as accountability to the public	**Future Quality:** • As education relevance to the future needs of individuals, the community, and the society
Quality Assurance	**Internal Quality Assurance:** • Improving the internal environment and processes such that the effectiveness of learning and teaching can be ensured to achieve the planned goals	**Interface Quality Assurance:** • Ensuring education services satisfying the needs of stakeholders and accountable to the public	**Future Quality Assurance:** • Ensuring the relevance of aims, content, practices, and outcomes of education to the future of new generations in a new era of globalization, information technology, and knowledge-driven economy
Major Approach/Model of Quality Assurance	**Internal Models:** • Goal and specification model • Process model • Absence of problem model	**Interface Models:** • Resource-input model • Satisfaction model • Legitimacy model • Organizational learning model • Total quality management model	**Relevance to new Paradigm in Education:** • Development of contextualized multiple intelligences • Triplization[1] in education: Globalization, localization and individualization
Main Questions for Management and Practice	• How well learning, teaching, and schooling are organized to deliver knowledge and skills? • How well can the delivery of knowledge can be ensured through the improvement of schooling, teaching, and learning? • How well teachers' teaching can be improved and developed in a given time period? • How well students can arrive at a given standard in examination?	• How well the performance of teaching and the outcomes of learning can meet the stakeholders' expectations and needs? • How accountable the education services can be to the public and stakeholders?	• How well learning, teaching, and schooling are triplized? • How well are students' learning opportunities maximized through IT environment, networking, CMI teachers, and CMI school?[2] • How well is students' self-learning facilitated and sustained as potentially life long? • How well is students' ability to triplize their self-learning developed? • How well is students' CMI continuously developed by themselves?

[1] "Triplization" is a new word created by Cheng (2003) to represent the whole process of globalization, localisation and individualization.

[2] "CMI" is the aconym of "contextualized multiple intelligences".

3.5 Quality Assurance in Developed Countries: A Brief Review

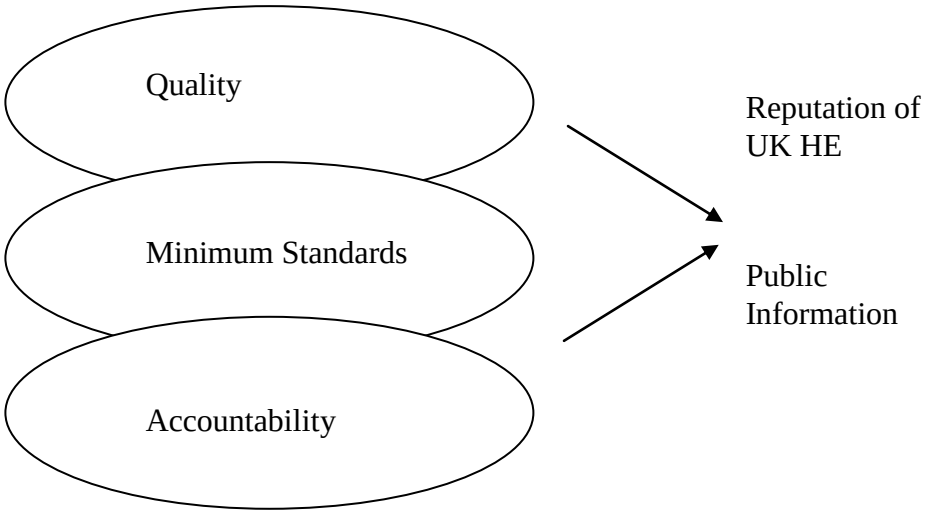
Kistan (1999, p. 125) maintains that, at the global level, "*higher education is undergoing major changes in its organisation. In this context, the concept of quality assurance control has emerged as a primary instrument for evaluating performance and accountability in higher education systems*." Different countries and many universities and higher education institutions in these countries have adopted a number of quality assurance programmes, or other quality programmes, in an attempt to improve their performance and offer stakeholders better quality higher education.

In the UK, higher education institutions are responsible for awarding their own degrees. In other words, they are not state accredited awards and each institution is responsible for maintaining the standards and quality for their degree (Bohrer, 2006). The emphasis in the UK is on higher education institutions managing their own quality assurance processes since they are responsible for the award they make. Nonetheless, internal quality assurance processes are monitored through external assurance procedures for such purposes which include the following five purposes (JM Consulting Ltd, 2005, p. 10):

- to promote quality;
- to provide public information;
- to ensure minimum standards, and to protect the public;
- to provide accountability;
- to protect and enhance the reputation of UK higher education.

These five purposes (JM Consulting Ltd, 2005), are not all independent of each other, although neither are they in conflict. Accountability, minimum standards, and promotion of quality might be conceived as lying along an axis, while information and the reputation of UK higher education are of a different kind, as illustrated in Figure 3.7.

Figure 3.7. Purposes of external QA in higher education.
(Source: JM Consulting Ltd, 2005, p. 11).



There are several external quality assurance processes to which higher education institutions are subject, including the following (JM Consulting Ltd, 2005):

- The regulations surrounding degree awarding powers and university title **(**a form of institutional accreditation and serve to ensure that institutions which award degrees and use the title of university satisfy a number of management, governance and quality control criteria).

- The funding councils' processes of institutional monitoring and audit.

- Review and monitoring by government departments and public bodies which contract with HEIs to deliver.

- Review by a wide range of professional and statutory regulatory bodies (PSRBs)**,** including: Initial Teacher Training; Undergraduate medical education; Non-medical health professions; Review and accreditation of a wide range of professional or vocational education in areas like law, engineering, computing, business, journalism, architecture by professional and statutory regulatory bodies.

In the UK, the Quality Assurance Agency for Higher Education was established in 1997 in order to preserve quality and standards in higher education and to inspect how well higher education institutions meet their responsibilities (QAA, 2009). The Quality Assurance Agency for Higher Education (QAA) was established to provide an integrated quality assurance service for UK higher education. QAA is an independent organisation that is funded by subscriptions from universities and colleges of higher education, as well as through contracts with the main higher education funding agencies. It exists in the UK to maintain the public interest in sound standards of higher education qualifications and to encourage continuous improvement in the management of the quality of higher education (Crum, 2004). In order to perform this, QAA undertakes reviews of individual universities and colleges of higher education. So far, the QAA has assessed the quality and standards of all one hundred and eighty higher education institutions in the UK at two levels: (1) Institutional Audit, concerned with the institution's efficacy at managing the academic standards of its awards and the quality of its programmes; and (2) Universal Subject Reviews, which assessed the performance of academic programmes (Blackmore, 2004).

QAA provide an approach in which providers of education can carry out a review of procedures, protocols and the practical organisation and management programmes (Storr and Hurst, 2001). These authors (p. 133) refer to the QAA approach as "*methodical, systematic, and holistic and focuses on student learning and achievement. Its underpinning principles not only involve stakeholders but also collation of robust evidence ...* "

The QAA model focuses on six aspects of provision: design, organisation and content of curricula, teaching learning and assessment, student progression and achievement, student support and guidance, learning resources, and quality management and enhancement (Storr and Hurst, 2001). Storr and Hurst (2001) assessed the QAA model for its suitability by using Maxwell's dimensions and concluded that the QAA model is appropriate, effective and relevant for in-service education services.

Jackson (2002, p. 139) indicates that QAA subject benchmarking is a good example of systemic policy introduced "*in good faith that it will ultimately enhance student learning because communities of subject-based practitioners will be clearer about the learning that is valued in and across subjects.*" Subject benchmark statements are aimed to form one of the external reference points for judging quality and standards of provision in higher education subject level in an integrated quality assurance policy framework (Jackson, 1998a, b; QAA, 2000a, b, c, d; 2002; Hargreaves and Christou, 2002).

The task given to the QAA is that of developing the concept, policy and infrastructure to support the establishment of information for benchmarking and its use in peer review processes (Jackson, 2002). In order to achieve this objective, the QAA (see Jackson, 2002, p. 14):

(1) "*established a framework of 42 subject or disciplinary groupings;*
(2) convened "expert committees" to prepare benchmarking statement; and
(3) provided general guidance for the work of these subject benchmark groups (QAA, 2000a."

Several practice contexts are used in which benchmark information could be employed, such as, the possible use within institutional curriculum design, review validation and other quality assurance processes (Hargreaves and Christou, 2002); the second context in which benchmark information is utilised concerns the process of external review (QAA, 2002). The third is that relating to the possibility of professional agencies to utilise this information within their programme accreditation process (Hargreaves and Christou, 2002).

However, there are some criticisms to internal academic quality audit. For example, Blackmore (2004) argues that in quality evolutionary terms, Internal Academic Quality Audit is nearer to inspection and QC (quality control) rather than to QA and TQM, in spite of the guarantees from the QAA that they are interested in auditing processes rather than outcomes. Blackmore (2004, p. 134 concludes that, obviously, to the extent that higher education institutions and their "*quality*" staff are concerned "*old habits die*

hard". She recommended that attitudes and methods must change if institutions are to accomplish any value-added return for the amount of resources they are putting into carrying "*out internal audits or it will be a case of "back to normal" after the auditors have gone*."

Subject Review invoked criticism by academic staff. As a case in a point, six economists at the University of Warwick who scored full marks in their Subject Review, referred to as the 'Warwick Six'. They criticised the QAA on three issues. The first, is the one reported by Macloed (2001) who indicated that: "… *a department that made lesser claims, and proved them, would get full marks*…". This criticism is aimed at the absence of benchmark standards for comparability between departments. Tribe (2003) argues that quality, under Subject Review, was assessed not against some universal agreement of excellence, rather it was evaluated against the less important test of how well an institution is functioning against its own description of education. Macloed (2001) referred to the 'Warwick Six' arguing that QAA numbers are in effect inadequate, yet no one explains this to parents, staff or the press.

The second 'Warwick Six' criticism was that the method is not scientific, arguing that institutions '…*supplied the hypothesis, the evidence and the witnesses*' (Macleod, 2001), that is, institutions can be highly selective in producing their case, by possibly hiding and covering up negative evidence while disseminating positive evidence (Tribe, 2003). In a word, there is substantial reach for spin, for instance, institutions were in charge of choosing their own witness panels of past and existing students, employee representatives and staff (Tribe, 2003).

The third criticisms is that the 'Warwick Six' also referred to the QAA's methodology as being so unstable that it by no means employs the same criteria twice. Macloed (2001) reported them indicating that "…*benefits are vastly outweighed by the process's immense costs. Our estimate is that in preparing for review…our one department has spent £150,000 to £200,000 in staff time alone.*". In addition, the 'Warwick Six' assert that "enthusiasm and scholarship are being strangled by bureaucratic monitoring and demands for paper trails" (Macleod, 2001).

The ‘Warwick Six’ were decidedly critical of the QAA. Macloed (2001) quoted them saying: “*our frank conclusion is that it is probably the most damaging and destructive system of regulation that could possibly have been devised. ….The procedures are at fault, not the people who operate them*.”

Butcher (2001, quoted in Tribe, 2003) reflected specially on Subject Review for HLRS&T subjects. Butcher (p. 23) was mainly concerned that the QAA version of quality “*misses or even diminishes some of the things I valued in my own education*.” Such things included that his preferred lecturers inspired him owing to their intellectual authority. In addition, while he notes that “*delivery, support systems, staff-student liaison, access, group work, assessment methods and lecture style were all issues that came up*,” he is surprised that “*developments in the subject, new books and ideas were not discussed*.” Butcher summed up the main problem of QAA quality as it encourages staff to focus on students but not the subject.

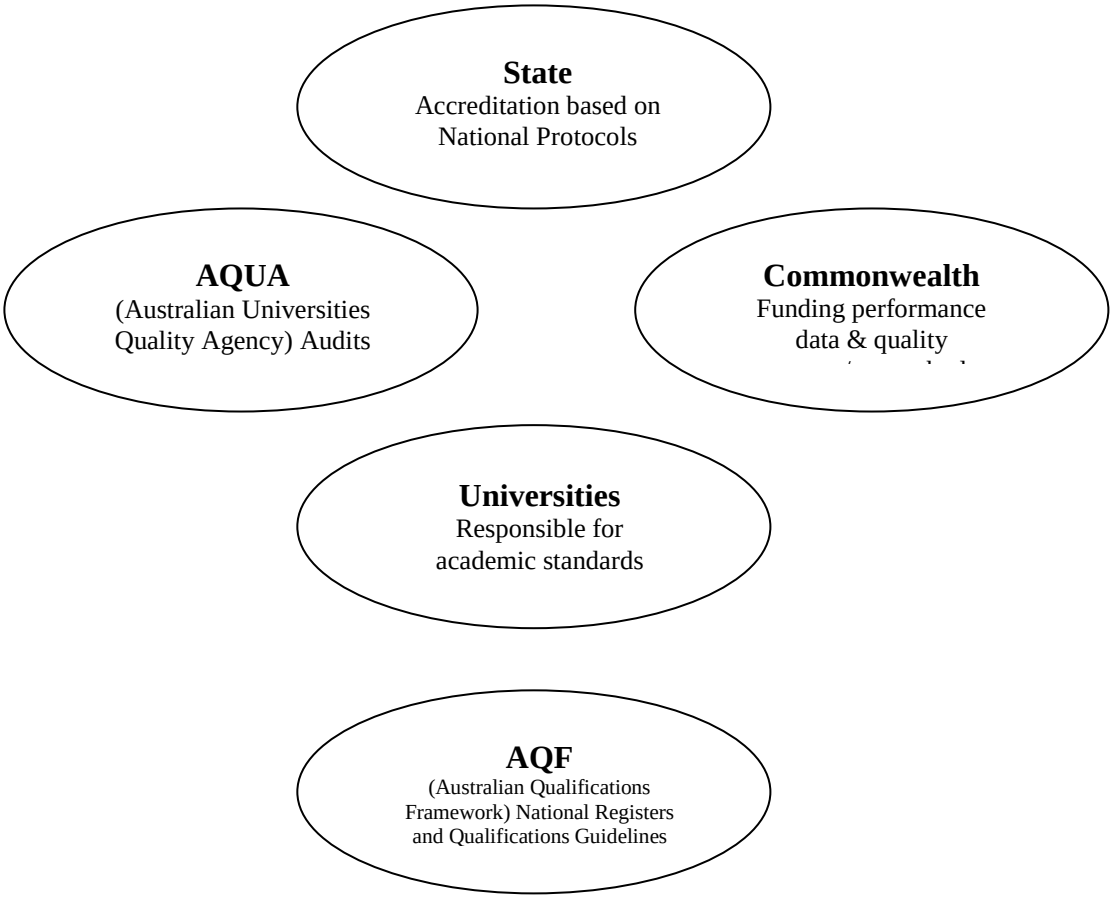
In Australia, the Australian Higher Education Quality Assurance Framework (see Figure 3.8) has been developed and supported by the Australian State, Territory and Commonwealth governments and the Australian Vice-Chancellors’ Committee. It encompasses interlinking university and government quality assurance processes and instruments of national policy, as explained below (Australian Qualifications Framework, 2002).

The term ‘university’ is protected by legislation in Australia whereby universities are founded by State or Territory legislation following a detailed assessment of their academic and financial credentials (Australian Qualifications Framework, 2002).

Universities are ‘self-accrediting’; that is, they are authorised to accredit their own courses and are responsible for their academic standards. This is similar to the UK case. Universities should have appropriate quality assurance processes in place, including peer assessment processes, external examination of higher degrees and the involvement of professional bodies in the accreditation of particular courses. There is also a small

number of self-accrediting higher education institutions which are not universities (Australian Qualifications Framework, 2002).

Figure 3.8. The Australian Higher Education Quality Assurance Framework. (Source: Australian Qualifications Framework, 2002).



Universities are listed on the Australian Qualification Framework (AQF) Register. Listing on the Register indicates that the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETA) assures the quality of the institution. State and Territory government accreditation authorities also accredit higher education courses delivered by approved non self-accrediting providers, and these are also listed on the Register (Australian Qualifications Framework, 2002).

Furthermore, all courses for international students should be approved by the relevant State or Territory accreditation authority, and listed on the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS) (Australian Qualifications Framework, 2002).

An additional dimension to quality assurance is introduced with the advent of the 'internet university'. Degree programmes can at present be accessed in Australia from the global market, which may include well known institutions, for example, Oxford or Harvard Universities as well as institutions without wide public recognition, which may contend to offer degrees recognised in Australia (Australian Qualifications Framework, 2002).

In their study on the quality policy in Australian higher education of the 1990s, Vidovich and Porter (1999) reported a set of factors that their respondents have identified as being the key influences in initiating quality policy in Australian higher education. They indicated that a general climate of increased need to demonstrate *accountability to stakeholders* was the major factor identified by the respondents in this regard. The second most frequent response concerns the impact of *global trends* and the need for Australia to adopt policies that are consistent with its competitors in the global marketplace (Vidovich and Porter, 1999). The third most frequent reason given for the importance of quality policy in Australian higher education was that of *business influence*. This, according to Vidovich and Porter (1999), included that impact of TQM movement from the corporate sector. Nonetheless, this factor was perceived in both negative and positive terms (Vidovich and Porter, 1999).

3.6 The Quality Gurus

The conceptual root of quality dates back to the work of Walter Shewhart in Statistical Process Control (SPC) at the Bell Laboratories in the USA during the third decade of the twentieth century. Shewhart was concerned with the development of a system to measure variables in production. He also designed the Plan-To-Check-Act cycle, which

employed the scientific method to improve work process (Evans and Lindsay, 2005). Shewhart's innovations were followed by the three major pioneers in the emerging quality movement; Edward W. Deming, Joseph M. Juran, and Philip B. Crosby.

The contribution of these three pioneers, often referred to as quality gurus, to improving quality had an overwhelming impact of large numbers of managers and organisations all over the world. Other quality gurus include Armand V. Feigenbaum, Kaoru Ishikawa, Bill Conway, Genechi Tagushi, Shigeo Shingo and W.G. Ouchi.

CHAPTER FOUR

QUALITY-RELATED MEASUREMENT SYSTEMS IN HIGHER EDUCATION

4.1 Introduction

Quality-related measurement is imperative under an output-based system; hence, it is not at all surprising to see mounting interest in this topic in higher education. According to Bomtaia (2002, p. 3-42): "*As a first step in setting up a system for performance measurement in higher education, a university should decide the weight each function is given: teaching, research and community service.*" This issue has been discussed and a 70/20/10 weighting has been suggested for teaching and learning, research, and community service, respectively which could be employed to evaluate the university activities (Massarro, 1995). Nonetheless, and despite the fact that such ratios provide a good generic base to start, the actual weights should be founded on the university's vision, mission and future goals (Bomtaia (2002). While such future goals might be rather common factors among all universities, some universities may have specific exclusive issues which need special focus. Conversely, the university needs to be cautious in setting standards for the academic staff, who, as Geddes (1993) warns, many are justifiably concerned with measurement of quality. This could be overcome, though to a certain extent, by setting the performance standards staff members themselves have had set, and this will allow those who have to deliver the service to set their own standards in consultation with the customers (Bomataia, 2002).

The use of student opinion to evaluate the quality of teaching is another key issue to be taken into consideration. This has been argued to limit the evaluation to perception, that is, how highly the participants thought of the learning experience, as opposed to performance, that is, whether it was successful in achieving its aims (Bomataia, 2002).

There are certain models that can be applied for the measurement of performance in higher education, three of which are: the Malcolm Baldrige National Quality Award (MBNQA), the Deming Prize, and the European Foundation for Quality Management (EFQM) Business Excellence Model. These three models are discussed in this chapter, with more focus on the MBNQA than on the other two models. This is due to the fact that this study is based on using this model to identify the perceptions of the HCT staff concerned with implementing the HCT quality programme. In addition the EFQM is founded on the principles of the MBNQA. The Deming Prize and the EFQM are discussed first then the MBNQA is explained in some detail.

4.2 The Deming Prize

The Deming Prize in one of the oldest quality awards awarded to organisations which have demonstrated to achieve high quality performance. It is therefore imperative to have some idea of this prize

Dr. W. E. Deming is the internationally-esteemed authority in the field of statistics, particularly the sampling theory and its practice. He is one of the founders of the statistical quality control in the United States. From 1950 and onward, Dr. Deming provided substantial contribution to post-war Japan to develop and advance the statistical quality control in the country. He was awarded the Second Order of the Sacred Treasure by the Japanese Government in recognition of his efforts (The Deming Prize Committee, 2008).

This prize was established in Japan in 1950 when the Union of Japanese Scientists and Engineers recognised W. Edwards Deming's contributions to the development of total quality control in post-war manufacturing infrastructure and processes of Japan (Grandzol et al., 2005). It comprises three categories: The Deming Application Prize, the Quality Control Award for Operations, and the Deming Prize for Individuals (Regulatory Compliance Services (RCS), 2007).

The Deming Application Prize comprises a checklist including ten primary factors. The primary factors are further divided variously into a minimum of four and a maximum of 11 secondary factors (Ghobadian and Woo, 1996). The ten factors are the following:

1. Policies.
2. The organisation and its operation.
3. Education and dissemination
4. Information gathering, communication and its utilisation.
5. Analysis.
6. Standardisation.
7. Control/management.
8. Quality assurance.
9. Effects.
10. Future plans.

Izadi et al. (1996) indicates that organisations do not necessarily compete for the Deming Prize each year rather, attainment of the award denotes that an organisation has reached a certain quality standard. There is no limit on the number of winners per year. The prize has several categories including individuals, factories, and divisions or small companies (Bush and Dooley, 1989).

Like the Baldrige Award and ISO 9000, in order to qualify for this prize, senior management should demonstrate commitment by applying. The application process, referred to as "challenging," is a process that takes 3-5 years and managers should prove to the Deming Prize Committee that they are ready for an on-site examination (Izadi et al., 1996). Recognized experts serve as examiners and audit the state of the quality system, paying special attention to the use of statistical methods and using a brief set of "particulars", referred to as the Deming Prize Application Checklist.

To qualify for the award, top management are required to score at least 70 points and no unit of the company may score less than 50 points. Companies applying for the prize receive a report of the comments and recommendations of the Deming Prize Committee

and such reports include findings concerning desirable and undesirable aspects of quality operations and include constructive suggestions (American Productivity and Quality Center, 1993).

Researchers have associated winning a quality award with improvements in organisation performance (Iaquinto, 1994). Pointing to the list of Deming Prize winners, for example, some of the most successful Japanese organisations, advocates of quality awards claim that winners have developed a competitive edge over other firms in their industries (Chen, 1989). Some authors also argue to demonstrate an empirical relationship between Deming winners and superior performance (Mann, 1989). Chen (1989), for example, asserts that Deming prize winners increased annual sales by about 14%, claiming that the annual profit margin of Deming companies grew by approximately 3%, higher than Japanese industry average of 1 percent. Nonetheless, these studies have their loopholes, such as not providing enough discussion concerning the methodology used (Iaquinto, 1994). Consequently, it is difficult to determine what controls, if any, had been employed in such studies. Iaquinto (1994) also argues that it is not possible to establish whether or not the differences in the performance figures were statistically significant. A number of authors have started to question the value of quality awards (Houston, 1990; Main, 1991). These authors claim that winning a quality award may in fact serve as a problem to individual organisation. Iaquinto (1994) argues that there is subjective evidence which indicates a negative relationship may exist between winning a quality award and firm performance.

4.3 The European Foundation for Quality Management (EFQM) Business Excellence Model in Higher Education

The EFQM was formed in 1988 by fourteen leading European businesses. It was done with the goal in mind of enhancing the competitive position of the European companies in the global market (Porter and Tanner, 2004). The European Foundation for Quality Management (2000) indicates that its mission is to:

- stimulate and assist organisations throughout Europe to participate in improvement activities leading ultimately to excellence in customer satisfaction, employee satisfaction, knowledge management, impact on society and business results; and

- support the managers of European organisations in accelerating the process of making TQM a decisive factor for achieving global competitive advantage.

The main reason to apply to the EFQM Excellence Model is to engage in business excellence through total quality management (TQM), hence, allowing businesses to compete successfully in European and global markets. The model is based on the TQM principles, including leadership, customer focus, continuous improvement, focus on facts, and everybody's participation (Dahlgaard et al., 2002).

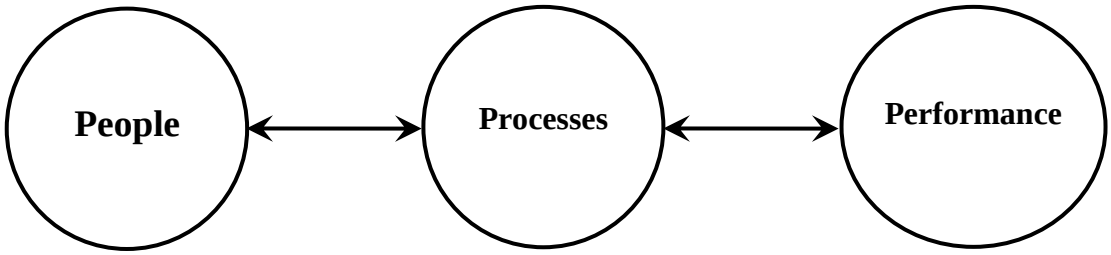
The model is built on eight concepts, namely, result orientation, customer focus, leadership and constancy of purpose, management of processes and facts, people development and involvement, continuous learning, partnership development, and public responsibility (EFQM, 1999). These eight concepts include all of the five TQM principles.

It draws on the experiences of both the Baldrige Award and the Deming Prize, and the EFQM was officially launched in 1991 the European Quality Award (EQA), as a way of identifying 'role models' of Excellence and giving them recognition for demonstrating that Europe could be competitive (Nilsson and Samuelsson, 2000). The model is based on the principle that customer satisfaction, people satisfaction and positive impact on society are accomplished through leadership driving policy and strategy, people management and processes that lead eventually to excellence in business results (Porter and Tanner, 2004).

Starting from the basic model (Figure 4.1), a set of criteria was presented against which applicants for the award were to be assessed. Such criteria were designed to support the award process and to track how far along the road to excellence applicants for the award

have travelled. By 1996, more than 1000 people were consulted as a part of the formulation of the final model (Porter and Tanner, 2004).

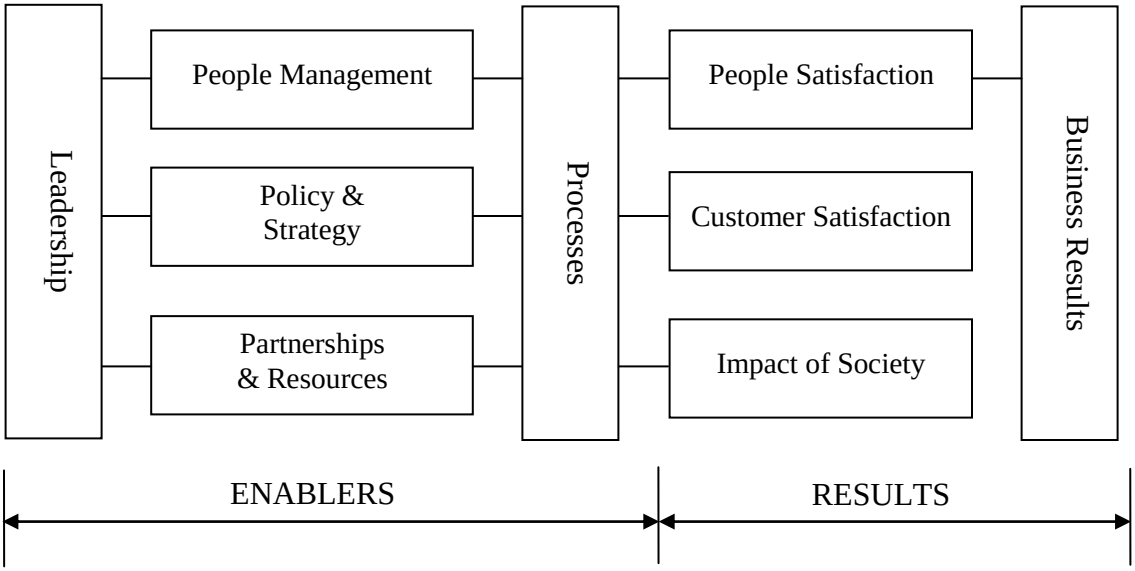
Figure 4.1. The basic award model.



This framework of criteria became what is commonly known as *The EFQM Excellence Model,* as illustrated in Figure 4.2. The principle on which the model is built is that (Lamotte and Carter, 2000):

> "*Excellent results with respect to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy, People, Partnerships and Resources, and Processes*."

Figure 4.2. The EFQM Excellence Model (www.efqm.org).



4.3.1 Model content structure

As illustrated in Figure 4.2, the model has nine criteria that are divided into two parts, enablers and results. The five enablers are (Nilsson and Samuelsson, 2000):

1. Leadership,
2. Policy & Strategy,
3. People,
4. Partnerships & Resources, and
5. Processes

These enablers drive the business and facilitate transformation of inputs to outputs and outcomes. They represent the "hows" rather than the "whats" (Nilsson and Samuelsson, 2000).

The results, including criteria six to nine (people results, customer results, society results, and key performance results), are the measure of the level of output and outcome attained by the organisation (Ghobadian and Woo, 1996). Where the enabler criteria

look for approach, the result criteria look for excellence of results and their scope. In terms of results the questions aim at defining the organisation's actual performance, the organisations performance against its own targets, and if possible, the performance compared to competitors and "best in class" organisations (Porter and Tanner, 2004).

The arrows in the model (Figure 4.2) emphasise its dynamic nature. They demonstrate innovation and learning helping to improve enablers that in turn lead to improved results (www.efqm.org, 2000).

A number of strengths have been identified in this model. Mønsted and Føns (2002) maintain that one of the model's strength is the holistic approach to achieve excellence, as it endeavours to include all the organisation's stakeholders (shareholders, customers, employees and society); hence, adding to a more holistic picture of the business. A second strength is the relation to financial results, as the model helps the inherent understanding of what is required to improve the financial result. The whole model has a causal structure, that is, the causal relationship between the criteria helps realise the model. The causal structure begins with leadership, which is responsible for the development of the structures and infrastructures compulsory to realise the required results, that is, people and customer satisfaction, impact on society and ultimately financial results (Mønsted and Føns, 2002). TQM supporters argue that the foundation for TQM (the TQM pyramid) in any organisation is leadership (Dahlgaard et al., 2000).

A further strength is that the model puts emphasis on prevention (Mønsted and Føns, 2002). Preventing accidents from happening enables the management to focus and spend more time on future activities. Finally, Mønsted and Føns (2002) argue that the model has a circular structure, which indicates continuous improvement of the organisation.

Nonetheless, the model has its limitations or weaknesses. For example, the EFQM, like the Baldrige model, lacks self-assessment; nonetheless, according to Conti (2007), this is "*an intrinsic lack that cannot be removed until the award organisations decide to waive*

the claim of covering both the award and self-assessment with the same model and process."

The model has been criticised for its assigned weights and that such weights may vary across industries. Eskildsen et al. (2000) argue that the market condition is not the same in every industry; hence, the strategic focus would differ, leading to different weighting of the model's criteria. A study by Eskildsen et al. (2001) has demonstrated that Danish firms did not weigh the criteria in a similar way as it is done in the model; in fact, they had a split of 700 points allocated to enablers and 300 points to the results. These authors also indicated that these firms could not focus within the enabler block, due to complexity as the criteria are related together in a complex structure, maintaining that it is difficult for organisations to separate them. This complex structure of the EFQM model is another criticism; the requirement for a model to be a holistic management tool is the demand for a simple structure (Eskildesn et al., 2001). As the model has nine criteria, as well as a large number of sub-criteria and a number of relationships; it is a complex model and such complexity demands more effort from organisations to fully understand the model (Mønsted and Føns, 2002).

Mønsted and Føns (2002) indicated that there is the lack of evidence in support of the causal structure. They also maintain that while the causal structure seems to be sound and logical, there is not much research concerning this issue. A study investigating this problem, involving more than seven hundred and fifty Danish chief executive officers revealed that the causal structure seems to exist (Eskildsen et al., 2000).

Meeting or assessing all the criteria, whether for award application or self-assessment, is expensive, and the time and financial investment is large, especially for small and medium-seized enterprises (SMEs), and is one of the drawbacks of the EFQM excellence model (Mønsted and Føns, 2002).

4.4 Baldrige National Quality Program

This program was called after Malcolm Baldrige, who was USA Secretary of Commerce between January 1981 and 1987. The Malcolm Baldrige Education Criteria for Performance Excellence are the basis for conducting organisational self-assessments, for making Awards, and for giving feedback to applicants. Furthermore, the Criteria have three important roles (Baldrige National Quality Program, 2008, p. 48):

- to help improve organisational performance practices, capabilities, and results
- to facilitate communication and sharing of information on best practices among education organizations and among U.S. organisations of all types
- to serve as a working tool for understanding and managing performance and for guiding organisational planning and communities for learning.

The goals of the Education Criteria for Performance Excellence are designed to help organisations use an integrated approach to organisational performance management that results in

- delivery of ever-improving value to students and stakeholders, contributing to education quality and organisational stability
- improvement of overall organisational effectiveness and capabilities
- organisational and personal learning. (Baldrige National Quality Program, 2008, p. 1).

The 2008 Education Criteria incorporate the Core Values and concepts, including: visionary leadership, learning-centred education, organisational and personal learning, valuing workforce members and partners, agility, focus on the future, managing for innovation, management by fact, social responsibility, focus on results and creating

value, and systems perspective (Baldrige National Quality Program, 2008) and are built on the seven-part framework used in the Business/non-profit Criteria. The seven Categories are: Leadership, Strategic Planning, Student, Stakeholders, and Market Focus (referred to in this study as Student Focus), Measurement, Analysis, and Knowledge Management, Workforce Focus (referred to in this study as Staff Focus), Process Management, and Results. Details of the research conceptual model, that is, the MBNQA, are given in Chapter Five, Section 5.4.1.

4.5 Organisational Culture

A relationship between quality and organisational culture has been identified in the literature. In order to implement quality management programmes successfully, the organisation's culture should be moulded to the quality method or the quality programme needs must be moulded to the organisation's culture (Klein et al., 1995). Vettori et al. (2007) have recently indicated that quality is profoundly connected to an organisation's culture, and concluded that quality concept provides a framework for institutional discernments and actions.

The literature (Klein et al., 1995; Calori and Sarnin, 1991; van Donk and Sanders, 1993; Saraph and Sebastian, 1993) has identified a relationship between quality and culture (Bardoel, and Sohal, 1999). According to Bardoel and Sohal (1999), this literature focuses on the link between quality improvement programmes and organisational culture. They refer specifically to Klein et al. (1995) who contend that in order to implement quality management programmes effectively, the organisation's culture must be moulded to the quality method or the quality programme needs to be moulded to the organisation's culture.

The culture of any organisation, according to Levicki (1996), is the corporate equivalent of the personal psychology of a human being. He argues that an individuals' psychological makeup define their personalities, how they behave, what they look like to others and what they do and do not concerning any set of circumstances. The culture of

an organisation operates in the same way and defines the type(s) of things that an organisation can and cannot do. This culture defines most aspects of the organisation's potentials similar to an individuals' psychology that largely control successes and failures in life.

Grant (1998) states that the ability of employees to harmonise their efforts and integrate their skills not only depends on the interpersonal skills, but may also depend on the organisational context. This organisational context as it affects internal collaboration is determined by an intangible resource; that is, the culture of the organisation. Organisational culture is a term that is particularly loose and ill defined, broadly relating to the values and traditions of social norms of a particular organisation.

Organisational culture has been defined differently by different people to explain a variety of phenomena. Because every author is likely to adopt a slightly different perspective, there is no universally accepted definition. One of the earliest serious attempts to produce a definition was that of E. Jaques, who define organisational culture as: "*the customary and traditional way of doing things, which is shared to a greater or lesser degree by all members, and which the new members must learn and at least partially accept, in order to be accepted into the services of the firm*" (Jaques, 1952, p. 251).

While Jaques's definition is useful, it focuses more on the effects of culture rather than culture itself (Rollinson et al., 1998). Two decades later, Harrison (1972; p. 119) produced a definition that gets nearer to addressing this point, that is, culture itself: "*the ideologies, beliefs and deep-set values which occur in all firms ... and are prescriptions for the ways in which people should work in these organisations*.". Barney (1986, p. 656), on the other hand, identifies organisational culture as a "*firm resource that is potentially very valuable and of great strategic importance*."

Two more recent definitions which set off a widespread interest in organisational culture are those of Peters and Waterman (1982), and Deal and Kennedy (1988), who define organisational culture as: "*a dominant and coherent set of shared valued conveyed by*

such symbolic means as stories, myths, legends, slogans, anecdotes and fairy tales" (Peters and Waterman, 1982, p. 103), or as "*the way we do things around here*" (Deal and Kennedy, 1988, p. 4).

At present, the most widely accepted definition of culture is that provided by Schein (1997), and several authors have adapted his definition (see for example, Rollinson et al., 1998, p. 532, Johnson et al., 2005, p. 196). Schein (1997, p. 6) defines culture as the "*basic* assumptions *and* beliefs *that are a basic taken-for-granted fashion an organisation's view of itself in its environment*." The definition of organisational culture, as adopted by Rollinson et al. (1998, p. 532), states that culture is "*a pattern of basic assumptions - invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration - that has worked well enough to be considered valuable and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems.*"

Smircich (1983) distinguishes five different streams of research linking the concepts of culture and organisation. She divided these five into two strongly contrasting schools of thought, though they have their own underlying assumptions. The first school is that of the key variable or application school, and the root metaphor school. In the first school, culture is viewed as an organisational property (something an organisation has) that can be manipulated to achieve success (Rollinson et al., 1998). A key assumption of this school is that culture is a crucial component of organisational success as it allows the firm to marshal the commitment of its members toward achieving its goals, therefore it is similar to Martin's integrationist perspective (Rollinson et al., 1998). This perspective offers the prospect of using culture to influence organisational performance; hence it has the strongest appeal to managers. As a result of this appeal, a considerable volume of work has been written in this area, the vast majority of which attempted to identify cultures which promote success, for example, works by Ouchi (1981), Peters and Waterman (1982), and Deal and Kennedy (1988), and advocate how to obtain these cultural characteristics, for example Kanter (1985). The second perspective, that is the root metaphor school, is that which assumes culture to reflect the essence of what an

organisation 'is' (Rollinson et al., 1998, p. 547). It is less concerned with linking culture with organisational performance since its main focus is on those who adopt this perspective, trying to understand how cultures are experienced by organisational members and how this affects the way they behave (Rollinson et al., 1998).

4.6 Models of Culture

4.6.1 Hofstede's Model

Hofstede (1984, 1986, 1991) undertook a cross-cultural study involving 116,000 employees of a multinational company operating in forty countries. His aim was to identify the basic dimensions of differences; that is, predominant traits, between national cultures. He first discovered four of these dimensions; namely, power distance, uncertainty avoidance, individualism-collectivism, and muscilinity-femininity. These four were later extended to include a fifth dimension, the long-term – short-term orientations (Hofstede and Bond, 1988). Each one of these dimensions represents a different continuum, so that each country can be rated from high to low are placed somewhere along each one, and not just at the ends.

4.6.2 Trompenaars's Model

Trompenaars (1993) also examined cultural differences in a global context. He was influenced by the work of Kluckhohn and Strodtbeck (1961) on value orientations and Hampden-Turner's (1983) dilemma theory. Trompenaars's research revealed seven dimensions of culture, each of which has within it a tension as exemplified by two opposite or polarised values. The seven dimensions are: universalism-particularism, individualism-collectivism, neutral-affective (inner directed-outer directed), specific relationship-diffuse relationship, achievement-ascription (achieved status-ascribed status, equality-hierarchy, and internal-external.

There is a fairly broad agreement among management gurus, consultants and senior management teams that culture is the major factor underpinning success in terms of

developing the necessary commitment to any form of change (Kanter, 1989; Kotter and Haskett, 1992). Sinclair and Collins (1994, p. 22) argue that culture is "*not simply an intervening variable, the "layer" between strategy and business results. Rather it is an explanatory variable which explains the nature and contours of the organisation and the interaction of people within it*." To sum up, organisations do not have cultures; they are culture, according to Young (1989).

Lomas (1999, p. 31) states that organisational culture has been defined as the "*values, myths, heroes and symbols that have come to mean a great deal to the people who work in a particular organisation*." Deal and Kennedy (1988, p. 4) describes it essentially as "*the way we do things round here.*" It can also be regarded as "*the glue that holds an organization together,*" according to Baron (1994, p. 64). An organisation's culture is made up of a range of rituals, stories, myths, routines and stories and underpinning assumptions and values. It is also greatly affected by organisational structure as well as by the distribution of power (Dopson and McNay, 1996).

Simple definitions of organisational culture imply that it can be considered in isolation and the notion is straightforward and uncomplicated. Nonetheless, it should be examined in relation to its structure, the technology that it adopts and the environment within which it operates (Bax, 1991).

The culture of an organisation is influenced by many factors. Hofstede et al. (1990), basing their research on investigating multi-national organisations, identify six independent dimensions based on whether the organisation:

(1) is process-oriented or results-oriented;
(2) is job-oriented or employee-oriented;
(3) is parochial or professional in outlook;
(4) operates in a closed system or an open system where it is subject to a far greater degree to the political, economic, social and technological environment;
(5) adopts a normative or a pragmatic approach; and
(6) exercises loose or tight control over its employees.

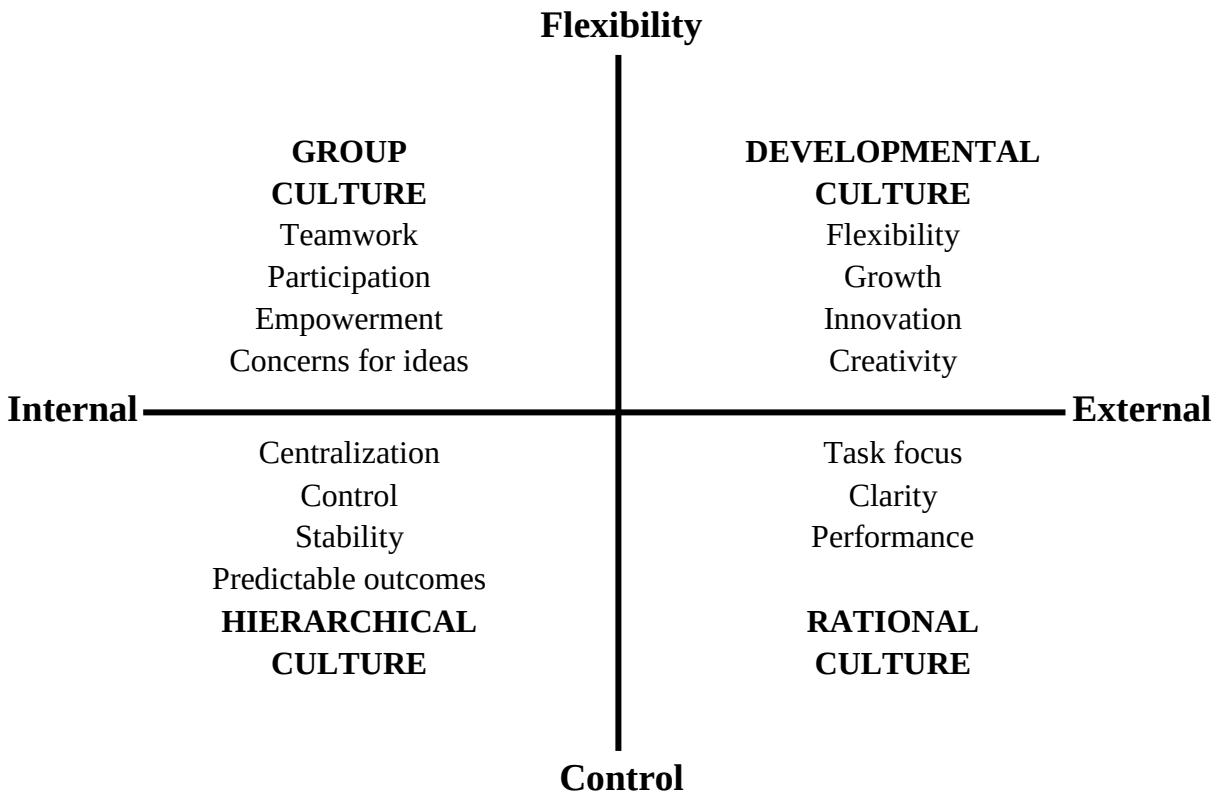
According to Schein (1997), each one of these dimensions will affect basic assumptions, beliefs and values and, as a result, their manifestation through organisational artefacts.

The culture of the HCT can be described as a developmental culture, according to Denison and Spreitzer's (1991) classification of organisational control. The developmental culture is both flexible and externally oriented, and emphasises growth innovation and creativity. HCT is flexible in its approach and are externally oriented towards the business community and society at large. One of the PQA Key Criteria, KC1, provides that each college within the HCT is individually responsible for demonstrating how the industry and community are satisfied with the PQA program (see Chapter six, Section 6.5).

The other three types of organisational culture are group culture, hierarchical culture, and rational culture, as illustrated in the Figure 4.3.

A survey carried out by Al-khalifa and Aspinwall (2000) found that the group culture and developmental culture are thought as ideal for quality management. Dellana and Hauser (1999) and Prajogo and McDermott (2005), using the MBNQA framework found that group culture and developmental culture are associated with higher level of the MBNQA practices. Prajogo and McDermott (2005) also found that rational culture and hierarchical culture to influence the implementation of quality practices, particularly those relating to the application of quality methods and tools for quality control. However, the present study focuses on quality assurance rather on quality control; hence rational culture and hierarchical culture do not have any influence on the implementation of quality practices adopted by the HCT.

Figure 4.3. Organisational culture classification, according to Denison and Spreitzer (1991).



The present study attempts to add an eighth criterion, that is, organisational culture, to the existing seven criteria of the MBNQA. This is due to the fact that organisational culture plays an important role in how an organisation operates and it affects the behaviours and outcomes of its members.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 Introduction

This chapter identifies the main research methods employed in the present study to investigate the effectiveness of the current quality programme implemented by the Higher Colleges of Technology (HCT), United Arab Emirates (UAE), with special reference to stakeholder satisfaction and organisational culture. To achieve this aim and study objectives, the researcher combines both qualitative and quantitative approaches, along with using the literature review. In this sense, the researcher applies the idea of triangulation and adopted the multi-method approach to achieve the study's aims and objectives. This idea is discussed later in this chapter. For the quantitative approach, a survey questionnaire is used, whereas for the qualitative approach, personal interviews, is conducted and content analysis of the quality programme implemented by the HCT will be carried out (see Chapter Six, Part One).

Two questionnaires were used to gauge stakeholders' perceptions and satisfaction with the quality programme implemented by the HCT. Stakeholders include staff concerned with the implementation of this quality programme, using a questionnaire based on Baldrige Criteria, as well as the HCT students, using a SERVQUAL based questionnaire. The interview, on the other hand, was employed to discuss the currently implemented quality programme, its effectiveness concerning its concept, approach and how they implement it, as will be explained later in this chapter. The content of the current programme has been analysed using the content analysis technique in Chapter Six, Part One. In this sense, the three methods; the questionnaire based survey, the semi-structured interviews, and the current quality programme's content analysis complement to each other enhancing reliability and validity. Further discussion of these

three methods, and their strengths and weaknesses are considered in this chapter. Issues relating to research design, strategy, questionnaire design, are also considered in this chapter.

There is a wide range of research strategies, research design, research methodology and research tools that researchers employ in order to generate data and information pertinent to their specific studies. The researcher's first task was to decide which research design and methodology would help him investigate the HCT's current quality programme and achieve the study's aims and objectives. To accomplish this task both qualitative and quantitative methodologies were employed, though each has their own merits and limitations. Employing both methodologies is perceived as providing a more in-depth and wider range of information and data

Researchers tend to generate both primary and secondary data relevant to their research programmes. Secondary data are those obtained through a search of the existing and relevant literature, as well as from data and information published as official statistics (Cooper and Schindler, 2001). Primary data are: "… *collected specifically for the research project being undertaken*" (Saunders et al., 2007, p. 607). In the case of the present study, primary data are those collected using questionnaires and semi-structured interviews.

Secondary data, also sometimes referred to as 'existing or available data, are data which were originally recorded or left behind or collected at an earlier time by a different person from the current researcher, often, or possibly, purposes which are totally different purpose from the current research purpose (Johnson and Turner, 2003). In other words, the researcher "*uses what is already there.*" (Johnson and Turner, 2003, p. 314).

The present study utilised secondary sources collected from the HCTs to generate information that helped answer research questions, accept or reject research hypotheses and achieve research aims and objectives.

Before attempting to probe further in this chapter, the research design is first reviewed due to its significance for the research process as a whole.

5.2 Research Design

Prior to starting research procedures, researchers need to assess and evaluate their research design relevant to their specific investigations. This is important because, as Hakim (2000) contends, researchers frequently fail to pay adequate attention to research design issues, and this failure may possibly be attributable to researchers' inability to identify design as their first, or most important, step in developing their research proposal.

Due to the complexity of the topic, authors have defined research design in many different ways. Cooper and Schindler (2001) report that there are many definitions of research design, but none imparts the full range of important aspects. Phillips (1971, p. 93) defines research design as:

> " *the blueprint for the collection, measurements, and analysis of data. It aids the scientist in the allocation of his limited resources by posing crucial choices: Is the blueprint to include experiments, interviews, observation, the analysis of records, simulation, or some combination of these? Are the methods of data collection and the research situation to be highly structured? Is an intensive study of a small sample more effective that a less intensive study of a large sample? Should the analysis be primarily quantitative or qualitative?*"

Hakim (2000) maintains that research design is about moving in the right direction, getting one's bearings right and making sure that a researcher is equipped to get there and back. Accordingly, she defines research design as:

> "*the point at which questions raised in theoretical or policy debates are converted into operational research projects and research programmes which will provide answers to these questions* (Hakim, 2000, p. xi).

Oppenheim (2000, p. 6) defines research design as:

> "*The basic plan or strategy of the research, and the logic behind it, which will make it possible and valid to draw more general conclusions from it. Thus, the research design should tell us how our sample will be drawn, what sub-groups it must contain, what comparisons need to be measured (when and at what intervals), and how these measures will be related to external events, for example to social, medical or other interventions. Research design is concerned with making our problem researchable by setting up our study in a way that will produce specific answers to specific questions*."

Although these definitions differ in detail, they provide the essentials of research design, which, according to Cooper and Schindler (2001, p. 134), include the following:

- *The design is an activity- and time-based plan.*
- *The design is always based on the research question.*
- *The design guides the selection of sources and types of information.*
- *The design is a framework for specifying the relationships among the study's variables.*
- *The design outlines procedures for every research activity*.

Cooper and Schindler (2001, p. 134) conclude that design provides answers for questions such as: *What techniques will be used to gather data? What kind of sampling will be used? How will time and cost constraints be dealt with?* They identified eight different design descriptors, though they indicate that no simple classification system defines all the variations which should be considered. Table 5.1 illustrates these eight descriptors and their nature and contribution to research.

Table 5.1. Descriptors of research design

Category	Options
The degree to which the research question has been crystallised	Exploratory study Formal study
The method of data collection	Monitoring Interrogation/communication
The power of the researcher to produce effects in the variables under study	Experimental Ex post facto
The purpose of the study	Descriptive Causal
The time dimension	Cross-sectional Longitudinal
The topical scope – breadth and depth – of the study	Case Statistical study
The research environment	Field setting Laboratory research Simulation
The subjects' perceptions of research activity	Actual routine Modified routine

Source: Cooper and Schindler (2001, p. 135).

Hakim (2000, pp. 3-5) identifies two major categories of research design: theoretical research and policy research. *Theoretical research* is concerned mainly with causal processes and explanation. The factors, or variables, considered as often abstract or purely theoretical constructs for which operational definitions and indicators of varying degrees of perception and validity are developed. The *intended* audience is the relevant section of the social science community, mainly the academics, who can all be assumed to speak the same specialist language. The long-term aim is the development of social science knowledge. This kind of research is essentially concerned with producing knowledge of understanding, usually within the context of a single social science discipline (Hakim, 2000).

In contrast to theoretical research, *policy research* is ultimately concerned with knowledge of action, and the long-term aim is in line with the famous principle that it is more important to change the world than to understand it. This broader objective implies that policy research encompasses a more diverse variety of research including theoretical research in many cases, but also descriptive research which maps out the

landscape of a topic, issue or a problem, and reviews of how existing policy is working extending in some cases into formal evaluation research (Hakim, 2000).

The *intended audience* for policy research includes all the relevant groups of policy-makers, decision-takers, public pressure groups, managers or organisations, client groups, etc. (Hakim, 2000).

Policy research is essentially differentiated from purely theoretical research by policy research focus on actionable factors (or variables), either in addition to, or in preference to, theoretical constructs. Actionable variables are often defined operationally from the very start, from the ground up rather than down from theory.

Wilson (1979, p. 116) adds a third type, that is, action research, which is close to policy research, though intervention is an intrinsic part of the research and not a separate phase as it is with policy research. Action research was introduced by Lewin (1946), though there is evidence of the use of action research by several social reformists before Lewin (McKernan, 1996). It has sometimes been claimed to be the only way of producing useful knowledge, though it has also been criticised of being unscientific (Grønhaug and Olson, 1999). It can be described as rigorous, practical, engaging people, and resulting in certain practical outcome related to the lives or work of participants (Stringer, 1999).

Action research has been defined in many ways. However, a relevant definition of action research for the purposes of the present study is that of Gilmore et al. (1986, p. 116):

> "*Action research...aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process*."

This definition is relevant to the present study in that it studies a system, that is, Program Quality Assurance (PQA) implemented by the HCT, and concurrently collaborating with members of staff and management dealing with this programme, and also to show the impact of the HCT organisational culture in implementing the PQA in a better way.

This discussion clearly demonstrates that the most appropriate approach to the needs of the present study is action research, since the objective is to answer questions aiming at the investigating the effectiveness of the current quality programme implemented by the HCT as demonstrated by the HCT's staff members concerned with the implementation of quality programme.

5.3 Approaches to Research

There are several methodologies and research instruments researchers can apply or utilise for the generation of data and information pertinent to their studies. The first task was to decide which methodologies would be best to identify the effectiveness of the quality programme implemented by the HCT, and which research instrument(s) would draw up suitable conclusions relevant to the issues under investigation. Two approaches to research are widely used, depending on the nature and type of research undertaken: qualitative and quantitative. Sarantakos (2005) differentiated between the two approaches and provides a detailed contrast of the two types of research, as presented in Tables 5.2. and 5.3.

Table 5.2. Perceived differences between quantitative and qualitative methodology, according to Sarantakos (2005, p. 55)

Features	Quantitative Methodology	Qualitative Methodology
Nature of reality	Objective; simple; single; tangible sense impressions	Subjective; problematic; holistic; a social construct
Causes and effects	Nomological thinking; cause-effect linkages	Non-deterministic; mutual shaping; no cause-effect linkages
The role of values	Value neutral; value –free inquiry	Normativism; value-bound inquiry
Natural and social sciences	Deductive; model of natural sciences; nomothetic; based on strict rules	Inductive; rejection of the natural sciences model; ideographic; no strict rules: interpretations
Methods	Quantitative; mathematical; extensive use of statistics	Qualitative, with less emphasis on statistics; verbal and qualitative analysis
Researcher's role	Rather passive; is the 'knower'; is separate from subject – the known: dualism.	Active; 'knower' and 'known' are interactive and inseparable
Generalisations	Inductive generalisations; nomothetic statements	Analytical or conceptual generalisations; time-and-context specific

Table 5.3 Comparison between the essential features of qualitative and quantitative research (Sarantakos (2005, p. 55)

Quantitative Research	Qualitative Research
Its purpose is to explain social life	Its purpose is to understand social life
Is nomothetic – interested in establishing law-like statements, cues, consequences, etc.	Is ideographic – describes reality as it is
Aims at theory testing	Aims at theory building
Employs an objective approach	Employs a subjective approach
Is ethiological – interested in *why* things happen	Is interpretative – interested in *how*
Is ahistorical – interested in explanations over space and time	Is historical – interested in real cases
Is a closed approach – is strictly planned	Is open and flexible in all aspects
Research process is predetermined	Research process is influenced by the respondent
Researcher is distant from respondent	Researcher is close to the respondent
Uses a static and rigid approach	Uses a dynamic approach
Employs an inflexible process	Employs a flexible process
Is particularistic, studies elements, variables	Is holistic – studies whole units
Employs random sampling	Employs theoretical sampling
Places priority of studying differences	Places priority on studying similarities
Employs a reductive data analysis	Employs an explicative data analysis
Employs high levels of measurement	Employs low levels of measurement
Employs a deductive approach	Employs an inductive approach

5.3.1 Qualitative Research

Qualitative research entails an emphasis on the qualities of entities as well as on processes and meanings which are not experimentally examined or measured, if measured at all, in terms of quantity, intensity or frequency (Denzin and Lincoln, 2000).

Merriam (1998) asserts that throughout qualitative research, the researcher is interested in the meaning and understanding of a phenomenon. This claim is rather consistent with that of Taylor and Bogdan (1984) who exemplify a good qualitative research as the combination of in-depth understanding of the specific setting considered with general theoretical insights. Similarly, Bell (2005) contends that qualitative research relates to

individuals' judgment of the world, and these judgements are expressed as seeking insight rather than statistical analysis, doubting whether social facts exist, and doubting whether a scientific approach can be used when dealing with human beings. It has also been reported that qualitative research entails the study of things in their natural settings (Denzin and Lincoln, 2000).

In the current research, semi-structured interviews with HCT management which is developed based on the survey findings. Interviews will be undertaken with a limited number of managers involved in implementing quality programme to allow them express their experience with the implementation and effectiveness of the currently implemented quality programme. It also involves the employment of the content analysis method to analyse this quality programme. Content analysis of current quality programme will be undertaken in Chapter Six, Part One. Details of the qualitative approach and its interpretation, using interview responses will be presented and analysed in Chapter Six, Part Two. Details of the quantitative approach and its interpretation, using questionnaire responses will be presented and analysed in Chapter Seven. Findings of the quantitative research will be analysed and discussed in Chapter Eight.

5.3.2 Quantitative Research

Quantitative studies emphasise the measurement and analysis of causal relationships between variables, not processes (Denzin and Lincoln, 2000). Quantitative research is an inquiry into an identified problem, based on testing a theory which consists of variables measured with numbers and analysed using statistical techniques. The purpose is to determine whether the predictive generalisations of a theory hold true. Quantitative research generates numerical outcome (Punch, 1998; Zikmund, 2000). Moreover, quantitative research provides descriptive documentation of sample population from which it is possible to draw generalisations to the wider population (Gilbert, 2001).

Bryman (2001) explains four distinctive preoccupations which can be perceived in quantitative research: measurement, causality, generalisation, and replication. He indicated that measurement is the most obvious preoccupation, and from the perspective

of quantitative research, it carries several advantages. Accordingly, issues of reliability and validity are a concern for quantitative researcher, despite the fact that this is not constantly apparent in research practice. In terms of causality, quantitative research is much concerned with explanation, and quantitative researchers are keen to reveal why things are the way they are (Bryman, 2001). With regards to generalisation, Bryman (2001) maintains that researchers are often concerned to be able to say that their findings can be generalised beyond the confines of the specific milieu where the research was undertaken. With respect to replication, quantitative researchers perceive replication, or the ability to replicate, as a key component of their actions. Quantitative researchers believe it is important to make clear their procedures; hence procedures can be replicated by others, even though the research does not end up being replicated (Bryman, 2001).

Experimental research and action research are two examples of the quantitative research methodology. Experimental research is concerned with the measurements of experiments utilising a 'control' group and another group given special treatment. The difference is measured and a relationship between cause and effect is then determined. Wilson (1979, p. 22) indicates that "*social causes do not act singly*", thus needing two groups to draw comparisons and conclusions.

5.3.3 Triangulation

The act of combining both quantitative and qualitative research methods is referred to as triangulation. Social scientists are said to show greater confidence in their findings when their data are derived from more than one source in their investigation (Webb et al., 1966). Later, triangulation was treated as an approach in which "multiple observers, theoretical perspectives, sources of data and methodologies are combined (Denzin, 1970, p. 310).

As indicated earlier, both qualitative and quantitative methods are used. Hence, the mixed method research approach is employed. Mixed methods research means the adoption of a research strategy that uses more than one type of research method, and the methods may be a mix of qualitative and quantitative methods. In the present study, a

mix of quantitative (questionnaire) and qualitative (semi-structured interview and content analysis) methods are employed. Consequently, data generated with interviews, content analysis and questionnaires consist of both qualitative and quantitative elements. Combining both approaches in the present study has two interrelated purposes. The first is to strengthen the whole research process and the validity of the resulting findings and interpretations. It has been claimed that combining research procedures and properly integrating them allows for the use of the strengths of each and provides some remedy for their respective deficiencies (Brewer and Hunter, 1989; Miles and Huberman, 1994). The second purpose is to respond to the noticeably complex situation surrounding quality strategy and implementation in the HCT context.

Qualitative and quantitative approaches differ in many aspects, for example, researchers in quantitative research assume a rather 'passive' role during data collection, in contrast to investigators in qualitative research who are actively involved in the process of data collection and analysis and are more aware of the flow of the process that quantitative researchers. While qualitative researchers are interested in inductive generalisations of the research findings, quantitative researchers are interested in the exploration and in making analytical or conceptual generalisations only. The qualitative methodology employs a nonpositivistic perspective; 'logic in practice' rather than a reconstructer's logic, and a non-linear path (Sarantakos, 2005, p. 54).

As indicated earlier, research instruments employed included questionnaires, content analysis and interviews. Taking field notes was also employed to enrich data and information generated by both techniques. In addition, existing literature relating to quality and quality programmes and awards was reviewed, analysed and discussed.

While questionnaires facilitate collection of data from a wider sample (thus giving the study a wide breadth) than is normally possible employing other methods as well as being the most common instruments used in the collection of data in social research, the interview will provide in-depth data and information. Content analysis of the current quality programme literature provides further in-depth information of the programme and its implementation by the HCT.

Findings of the quantitative survey will be presented, analysed and discussed in Chapter Seven and Chapter Eight. Content analysis of the quality programme implemented by the HCT is carried out in Chapter Six, Part One. Findings of the qualitative study (interviews) are presented and analysed in Chapter Six, Part Two.

5.4 Research Methods

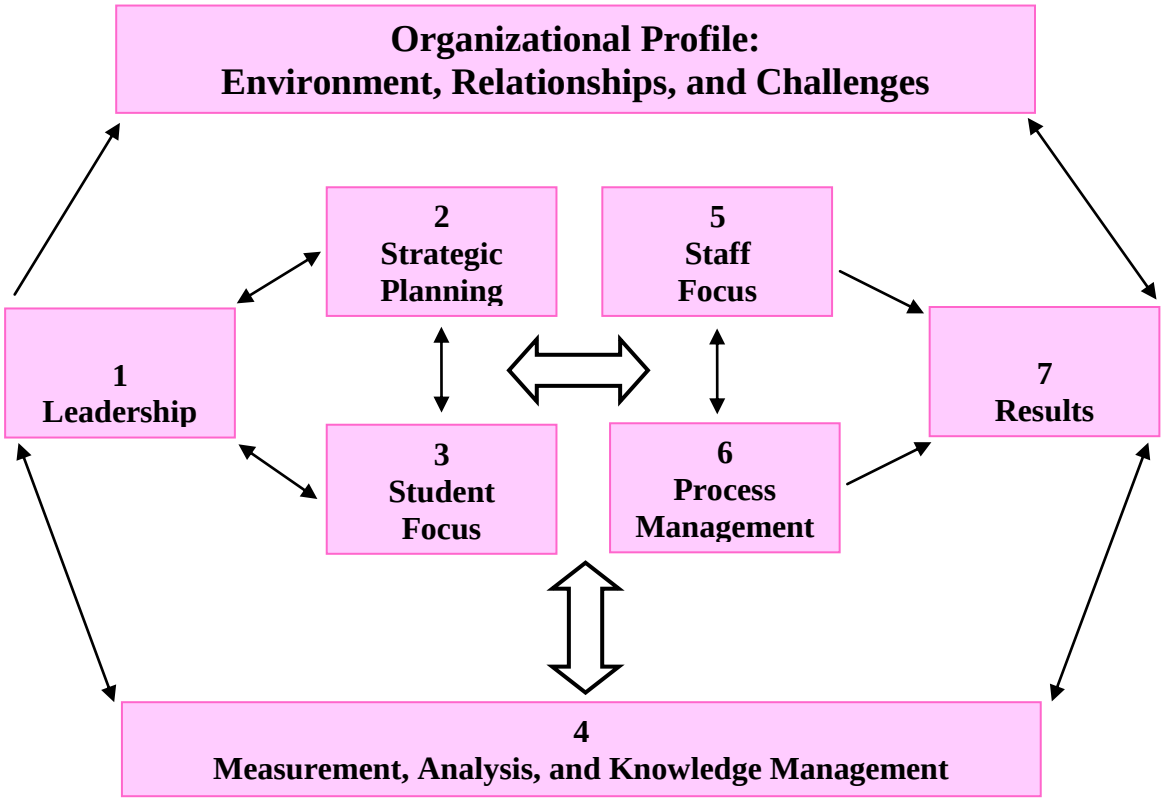
The current research strategy is based on mixed methodology approach, where both qualitative and quantitative approaches will be used. The methods used include the survey method, using a questionnaire (quantitative approach), content analysis and semi-structured interviews (qualitative approach).

5.4.1 Research Conceptual Model (MBNQA)

As indicated in Chapter Four, Section 4.4, this model consists of seven Categories: Leadership, Strategic Planning, Student, Stakeholders, and Market Focus (referred to in this study as Student Focus), Measurement, Analysis, and Knowledge Management (MAKM), Workforce Focus (referred to in this study as Staff Focus), Process Management, and Results. The author has developed the model further by adding an eighth criterion, that is, organisational culture.

Figure 5.1 provides the framework connecting and integrating the Categories. From top to bottom, the framework has the following basic elements: Organisational Profile, which sets the context for the way HCT operates, System Operations (Leadership, Strategic Planning, Student Focus, Staff Focus, Process Management, and Results), and System Foundation (Measurement, Analysis and Knowledge Management) (for details, see Baldrige National Quality Program, 2008, p.1).

Figure 5.1. Baldrige Education Criteria for Performance Excellence Framework: A Systems Perspective. (Baldrige National Quality Program, 2008, p. iv)



As illustrated in Figure 5.1, the Organizational Profile sets the context for the way the organisation operates. The organisational environment, key working relationships, and strategic challenges and advantages serve as an overarching guide for the organisational performance management system (Baldrige National Quality Program, 2008).

The system operations comprise the six Baldrige Categories in the centre of Figure 5.1 which define the organisation's operations and the results it achieves (Baldrige National Quality Program, 2008).

Leadership (Category 1), Strategic Planning (Category 2), and Student, Stakeholder, and Market Focus (referred to in this study as Student Focus, see Figure 5.1) (Category 3) represent the leadership triad. These three Categories are put together to emphasise the

significance of a leadership focus on strategy and on students. Senior leaders set the organisational direction and seek future opportunities for the organisation (Baldrige National Quality Program, 2008).

Workforce Focus (referred to in this study as Staff Focus, see Figure 5.1) (Category 5), Process Management (Category 6), and Results (Category 7) represent the results triad. The organisation's staff and key processes achieve the work of the organisation which yields the organisation's overall performance results (Baldrige National Quality Program, 2008).

All actions point toward Results; a composite of student, stakeholder, market, budgetary, financial, and internal operational performance results, including staff, leadership, governance, and social responsibility results (Baldrige National Quality Program, 2008).

The horizontal arrow in the centre of the framework (Figure 5.1) links the leadership triad to the results triad, a linkage that is critical to organisational success. In addition, the arrow indicates the central relationship between Leadership (Category 1) and Results (Category 7), and the two-headed arrows indicate the importance of feedback in an effective performance management system (Baldrige National Quality Program, 2008).

Measurement, Analysis, and Knowledge Management (Category 4) are vital to the effective management of the organisation and to a fact-based, knowledge-driven system for improving performance. This Category serves as a foundation for the performance management system (Baldrige National Quality Program, 2008, p. 1).

5.4.1.1 Leadership

Traditionally, the study of leadership has been directly tied to the study of the leaders and their relationship with followers (Andrews and Field, 1998, p. 128). This is summed up in Johnson *et al.*'s (2005, p. 291) definition of leadership: "*the way in which the functions of leadership are carried out, the way in which the manager typically behaves towards members of the group*." There are many other definitions in this

direction. For example, Gardner (1990, p. 38) defines leadership as: "*the accomplishment of group purpose which is furthered not only by effective leaders but also by innovators, entrepreneurs, and thinkers; by the availability of resources; by questions of value and social cohesion*." Horner (1997) states that by this definition, leadership can be envisaged as a broad phenomenon. Weihrich and Koontz (1993, p 490) define leadership as "*influence, that is the art or process of influencing people so that they will strive willingly and enthusiastically toward the achievement of the group's mission*."

However, there has been mounting evidence in recent years that follower perceptions have an important role in determining relationship outcomes (Chen and Meindl, 1991; Lord *et al*., 1984; Shamir *et al.*, 1994). Such outcomes have led to a changing definition of the locus of leadership (Andrews and Field, 1998), as reflected in Bass (1990, p. 19) of leadership: "*an interaction between two or more members of a group that often involves a structuring or restructuring of the situation and the perceptions and expectations of members*." In a similar vein, Mullins (2005, p. 282) defines leadership as: "*A relationship through which one person influences the behaviour or action of other people*." Following from such definitions is a concern with three things; leaders, followers and their interactions.

Leadership is the key driver in quality assurance programmes. Vora (2002) indicates that without the involvement and commitment of senior leaders, the quality management journey becomes difficult and at times impossible. The MBNQA model evaluates top management leadership's ability to inculcate quality values and customer focus among the employees, and to constantly improve their leadership styles. Senior leaders must serve as role models through their ethical behaviour and personal involvement in planning, communication, coaching, development of future leaders, reviewing of organisational performance, and faculty and staff recognition (Vora, 2002).

Leadrship dimension examines how the HCT's senior leaders guide and sustain the HCT. It also examines HCT's governance and how HCT addresses its ethical, legal, and

community responsibilities (Baldrige National Quality Program, 2008). This dimension in Baldrige Education Criteria for Performance Excellence includes two categories:

- Senior leadership.

- Governance and Social Responsibilities.

Senior leadership dimension describes how leaders guide and sustain the HCT and describes how senior leaders communicate with their workforce [staff members] and encourage high performance (Baldrige National Quality Program, 2008).

The Governance and social responsibilities dimension describes how the HCT addresses its responsibilities to the public, ensures ethical behaviour, and practices of good citizenship (Baldrige National Quality Program, 2008).

5.4.1.2 Strategic Planning

The emphasis concerning the "strategic planning" criterion is on sustaining marketing changes and needs, and using advanced technology for launching new products and services (Khoo and Tan, 2003; Mak, 1999, 2000). For higher education, the category highlights that learning centred education and operational performance are key strategic issues which should be integral parts of the organisation's overall planning (Badri et al., 2006). Learning-centred education focuses on the real needs of students, including those derived from market requirements and citizenship responsibilities. The criteria emphasise that improvement and learning should be embedded in work processes (Badri et al., 2006).

Strategic planning examines how the HCT develops strategic objectives and action plans, and how its chosen strategic objectives and action plans are deployed and changed if circumstances require, and how progress is measured (Baldrige National Quality Program, 2008, p. 10). This dimension has four categories (Baldrige National Quality Program, 2008, pp. 10-11).

- strategy development (*strategy development process*, and *strategic objectives*); and

- strategy deployment (*action plan development and deployment*, and *performance projection*).

Strategy development might utilise various types of forecasts, projections, options, scenarios, knowledge or other approaches to envisioning the future for purposes of decision making and resource allocation. Strategy development might involve key suppliers, partners, students, and stakeholders" (Baldrige National Quality Program, 2008). "Strategy deployment" describes how the organisation converts its strategic objectives into action plans. It also summarises organisation's action plans and related key performance measures or indicators, as well as it projects the organisation's future performance relative to key comparisons on these performance measures or indicators (Baldrige National Quality Program, 2008).

Tapinos et al. (2005, p. 371) refer to strategic planning as the "*set of processes undertaken in order to develop a range of strategies that will contribute to achieving the organizational direction*." They indicate that there are different definitions of strategic planning expressed in the literature, maintaining that a very inclusive definition is "*strategic planning attempts to systematise the processes that enable an organization to attain its goals and objectives. There are five general steps in the strategic planning process: goal/objective setting, situation analysis, alternative consideration, implementation and evaluation*" (Crittenden and Crittenden, 2000).

5.4.1.3 Student Focus

The MBNQA stresses this issue in its ''Student, Stakeholder, and Market Focus'' criterion. This category examines how the HCT determines the requirements, needs, expectations, and preferences of students. It also examines how the HCT builds relationships with students and determines the key factors that attract students and lead to student satisfaction and loyalty, student persistence, increased educational services

and programmes, and organisational sustainability (Baldrige National Quality Program, 2008).

The student focus dimension in the Baldrige Education Criteria for Performance Excellence includes two categories:

- Student, Stakeholder, and Market Knowledge: This describes how the organisation determines requirements, needs, expectations, and preferences of students, stakeholders, and markets to ensure the continuing relevance of its educational programmes, offerings, and services; to develop opportunities for new programmes, offerings, and services; and to create an overall climate conducive to learning and development for all students (Baldrige National Quality Program, 2008).

- Student and Stakeholder Relationships and Satisfaction: This describes how the organisation builds relationships to attract, satisfy, and retain students and stakeholders and to increase student and stakeholder loyalty. It also describes how the organization determines student and stakeholder satisfaction and dissatisfaction (Baldrige National Quality Program, 2008).

The MBNQA criteria evaluate customer relations and by doing so, they establish how special training and career requirements of customer-contact employees are satisfied (Badri et al., 2006). This dimension in higher education context is an important component of total listening, learning, and performance excellence. Student satisfaction and dissatisfaction results present essential information for understanding students. According to Badri et al. (2006, p. 1125): "*In many cases, these results and trends provide the most meaningful information, not only on students' and stakeholders' views but also on their actions and behaviors – student persistence and positive referrals*."

5.4.1.4 Measurement, Analysis, and Knowledge Management (MAKM)

This category examines how the HCT selects, gathers, analyses, manages, and improves its data, information, and knowledge assets and how it manages its information technology. It also examines how the HCT reviews and uses reviews to improve its performance (Baldrige National Quality Program, 2008). This category includes two sub-categories:

- Measurement, Analysis, and Improvement of Organisational Performance. This addresses how the HCT measures, analyses, and then improves its performance (Baldrige National Quality Program, 2008).

- Management of Information, Information Technology, and Knowledge. This addresses how the HCT manages information, information technology, and organisational knowledge (Baldrige National Quality Program, 2008).

The MBNQA criteria evaluate information analysis at different levels of business, though the MBNQA does not call for the evaluation of the financial performance of an organisation (Badri et al., 2006). Nonetheless, it evaluates the ability of the institution to link quality and operational data to financial performance, and evaluates the methods employed to constantly improve its information gathering and analysis cycle. In higher education, this dimension is the focal point within the criteria for all key information regarding effectively measuring and analysing performance and managing organisational knowledge to drive improvement in student and operational outcomes (Badri et al., 2006).

Ahmed et al. (1999) reported that as competition increases and business preparing itself for the challenges of the twenty-first century, knowledge management has come to occupy centre stage, and that certainly there is at present a source of interest in knowledge management, as it is evidenced by the increase in the number of books,

articles and papers written by practitioners and academics on this topic. Ahmed et al. (1999) differentiated between knowledge and information. They argue that knowledge stems from data and data serve as the essential knowledge, which when combined yield meaningful information. They maintained that it is this combination which makes information.

Saint-Onge (1996) defined two types of knowledge: explicit and tacit. "Explicit knowledge is the knowledge that can be easily captured artificially through say manuals, standard operations and then shared with others either through thought courses or through books for self reading." …… "*Tacit knowledge is the skills and "know-how" we have inside each of us that cannot be easily shared*" (Ahmed et al., 1999, p. 305). Nonaka and Takeuchi (1995) maintain that while tacit, or implicit, knowledge is personal, unarticulated, unrecorded and difficult, some would contend impossible, to elicit and manage, explicit knowledge is formal, systematic, and comparatively easy to communicate and share.

5.4.1.5 Staff Focus

The Staff Focus (referred to in Faculty and Staff Focus in Baldrige National Quality Program (2008)] examines how the HCT engages, manages, and develops it workforce to utilise its full potential in alignment with the HCT's overall mission, strategy, and action plans. The Category examines the HCT's ability to assess workforce capability and capacity needs and to build a workforce environment conducive to high performance (Baldrige National Quality Program, 2008, p. 17). This category includes two categories:

- Workforce Engagement: This addresses how HCT engages its workforce to achieve organisational and personal success. It describes how HCT engages, compensates, and rewards its workforce to achieve high performance; how HCT staff members, including leaders, are developed to achieve high performance, and how HCT assesses staff engagement and use the results to achieve higher performance.

- Workforce Environment: This addresses how HCT builds an effective and supportive workforce environment. It describes how HCT manages workforce capability and capacity to accomplish HCT work, and how HCT maintains a safe, secure, and supportive work climate.

The MBNQA criteria emphasise the need for human resource plans to support and help accomplish the organisation's goals. In higher education, faculty and staff focus addresses key human resource practices, that is, those directed toward creating and maintaining a high-performance workplace with a strong focus on students and learning and toward developing faculty and staff for adaptation to change (Badri et al., 2006).

Baldrige National Quality Program (2008) reports that the literature has shown that high levels of staff engagement have a significant, positive impact on organisational performance. It also maintains that research has indicated that engagement is characterised by performing meaningful work; having organisational direction, performance accountability, and an efficient work environment; and having a safe, trusting, and cooperative environment.

5.4.1.6 Process Management

The criteria evaluate supplier quality management more thoroughly, measuring not only the methods employed to inspect incoming material but also actions taken to improve the quality of supplied material and hence reduce the cost of inspection (Badri et al., 2006). They also evaluate the methods employed by the business to audit and improve its own quality assessment practices. In higher education, process management is the focal point within the Education Criteria for all key processes (Badri et al., 2006).

Process Management category examines how the HCT determines its core competencies and work systems, how it designs, manages, and improves its key processes for implementing those work systems to deliver student and stakeholder value and achieve organisational success and sustainability, and also examines the HCT's readiness for

emergencies. This category includes two sub-categories (Baldrige National Quality Program, 2008):

- Work Systems Design: This describes how HCT determines its core competencies and designs its work systems and key processes to deliver student and stakeholder value, maximise student learning and success, prepare for potential emergencies, and achieve organizational success and sustainability.

- Work Process Management and Improvement: This describes how the HCT implements, manages, and improves its key work processes to deliver student and stakeholder value and achieve organisational success and sustainability.

5.4.1.7 Results

In higher education, the organisational performance results category provides a results focus which includes student learning; student and stakeholder satisfaction; and overall budgetary, financial, and market performance (Badri et al., 2006). In addition, initiatives seek to create a positive, productive, learning-centred, and supportive work environment; governance structure and social responsibility; and recognition of results for all key processes and process improvement activities. Badri et al. (2006, p. 1126) argue: "*Through this focus, the criteria's purposes – superior value of offerings as viewed by students, stakeholders, and markets; superior organizational performance as reflected in operational, legal, ethical, and financial indicators; and organizational and personal learning – are maintained*." They concluded that this dimension provides "real-time" information (measures of progress) for evaluation and improvement of educational programmes, offerings, services, and organisational processes, in line with the general operational strategy. It calls for analysis of organisational results data and information to determine the overall organisational performance. Responses must include comparison information which incorporates brief descriptions of how the organisation ensures appropriateness of each comparison. The organisational performance results dimension is given by six sub-categories (Badri et al., 2006):

- Student Learning Results. This summarises HCT's key student learning results, divides HCT's results by student segments and includes appropriate comparative data relative to competitors and to comparable organisations and student populations. HCT operates in a highly competitive higher education market in the UAE, where there are many universities and higher education institutions, as explained in Chapter Two.

- Student-Focused Outcomes: This summarises HCT's key student results for student satisfaction and perceived value, including student loyalty. It also subdivides HCT's results by student segments.

- Budgetary, Financial, and Market Outcomes: This summarises HCT's key budgetary, financial, and market performance results by student segments.

- Workforce-Focused (Staff-Focused) Outcomes: This summarises HCT's key staff-focused results for staff engagement and for HCT's staff environment. It segments HCT's results to address the diversity of its workforce and to address staff groups.

- Process Effectiveness Outcomes: This summarises HCT's key operational performance results that contribute to opportunities for enhanced student learning and to the improvement of organisational effectiveness, including HCT's readiness for emergencies. It also subdivides HCT's results by programmes, offerings, and services; by processes and locations; and by student segments.

- Leadership Outcomes: It summarises HCT's key governance and senior leadership results, including evidence of strategic plan accomplishments, ethical behaviour, fiscal accountability, legal compliance, social responsibility, and organisational citizenship. It also divides HCT's results by work units, as appropriate.

5.4.2 Organisational Culture

Organisational culture has, as indicated in Section 4.5, been defined in different ways. One of these definitions, as adopted by Rollinson et al. (1998, p. 532), states that culture is "*a pattern of basic assumptions - invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration - that has worked well enough to be considered valuable and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems.*"

The literature has indicated that there is a relationship between quality and organisational culture, and to implement quality management programmes successfully, the organisation's culture has to be shaped to the quality method or the quality programme needs should be moulded to the organisation's culture (Klein et al., 1995). Recently, Vettori et al. (2007) have maintained that quality is strongly linked to an organisation's culture, concluding that quality concept provides a framework for institutional discernments and actions. As indicated in Chapter Four, Section 4.5, the literature has identified a relationship between quality and culture, and this literature focuses on the relation between quality improvement programmes and organisational culture.

5.4.3 Theoretical Framework and Hypotheses

The researcher has examined a number of articles published by authors who have employed the MBNQA framework. Winn and Cameron (1998), Meyer and Collier (2001) and Badri et al. (2006) employed the same framework. Badri et al.'s (2006) framework is taken as an example of these frameworks, as illustrated in Figure 5.2.

Another framework was that suggested by Finn and Porter (1994) and Tummala and Tang (1996). Finn and Porter's framework is taken as an example of this framework, as depicted in Figure 5.3.

Figure 5.2. Badri et al.'s Framework (Badri et al., 2006, p. 1136)

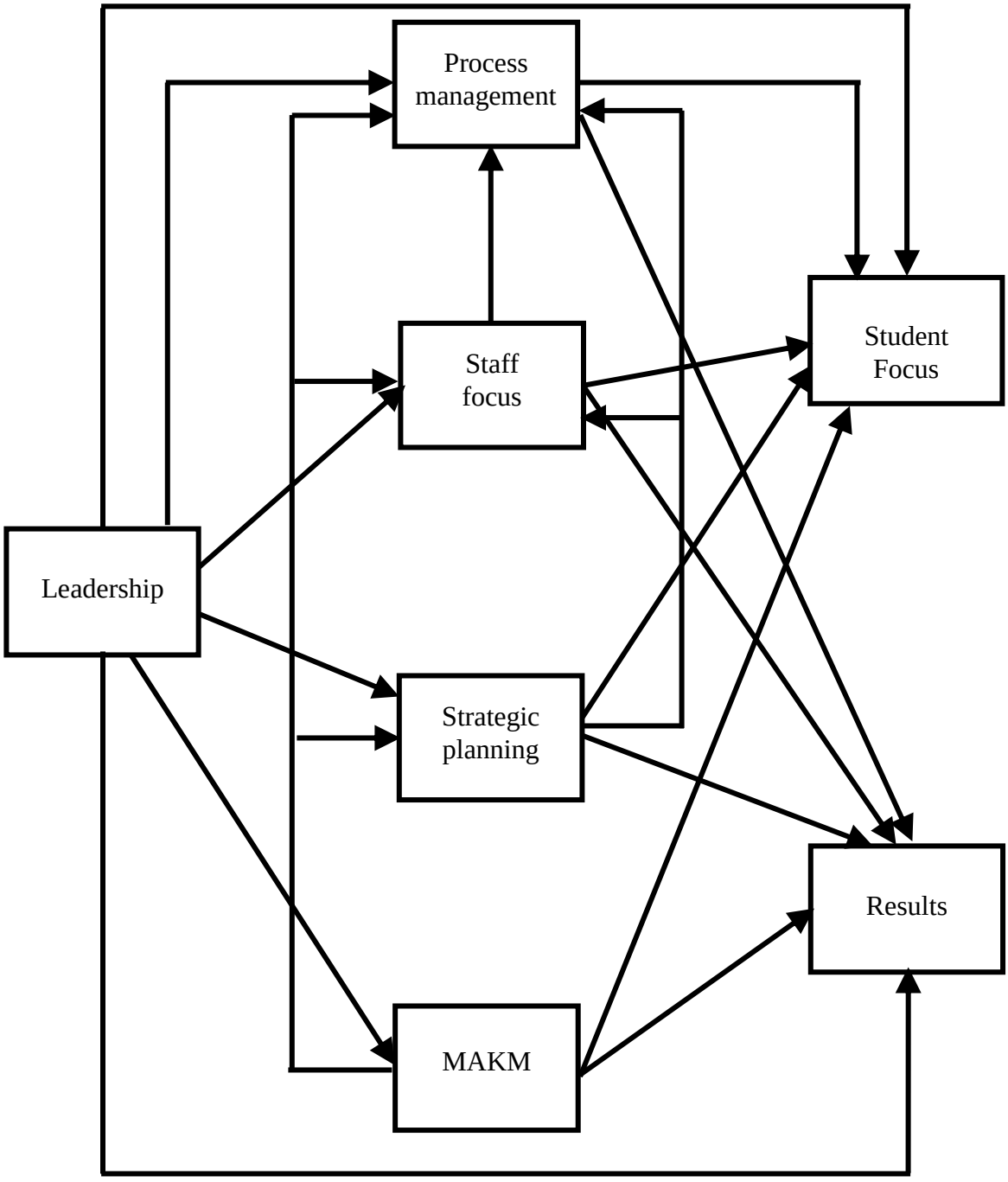
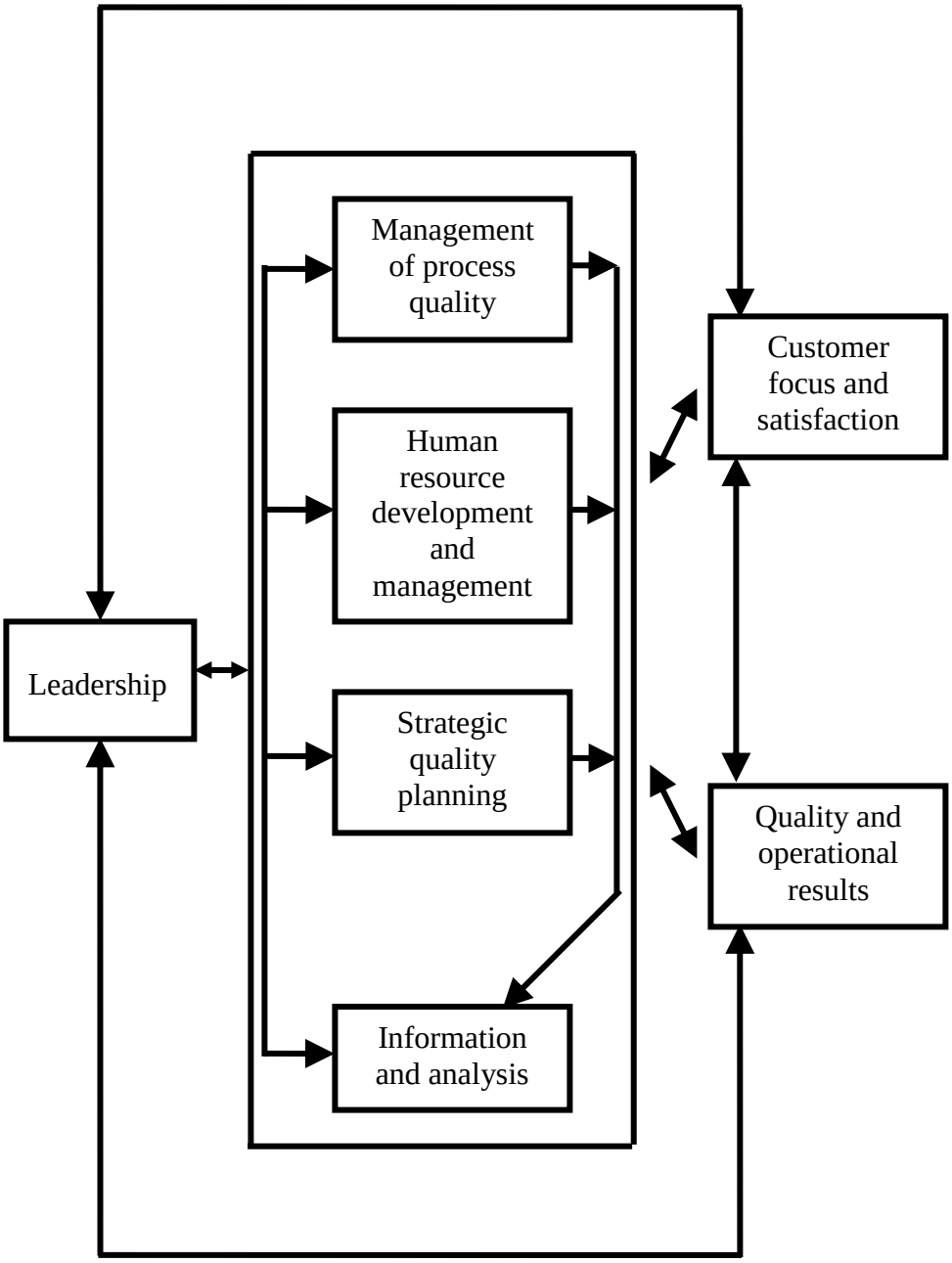


Figure 5.3. Finn and Porter's framework (Finn and Porter, 1994, p. 57).



Ruben et al. (2005) introduced a third type of MBNQA framework, as demonstrated in Figure 5.4. Pannirselvum and Ferguson (2001) introduced a fourth type of MBNQA framework, as demonstrated in Figure 5.5.

Figure 5.4. Ruben's framework (Ruben, 2005).

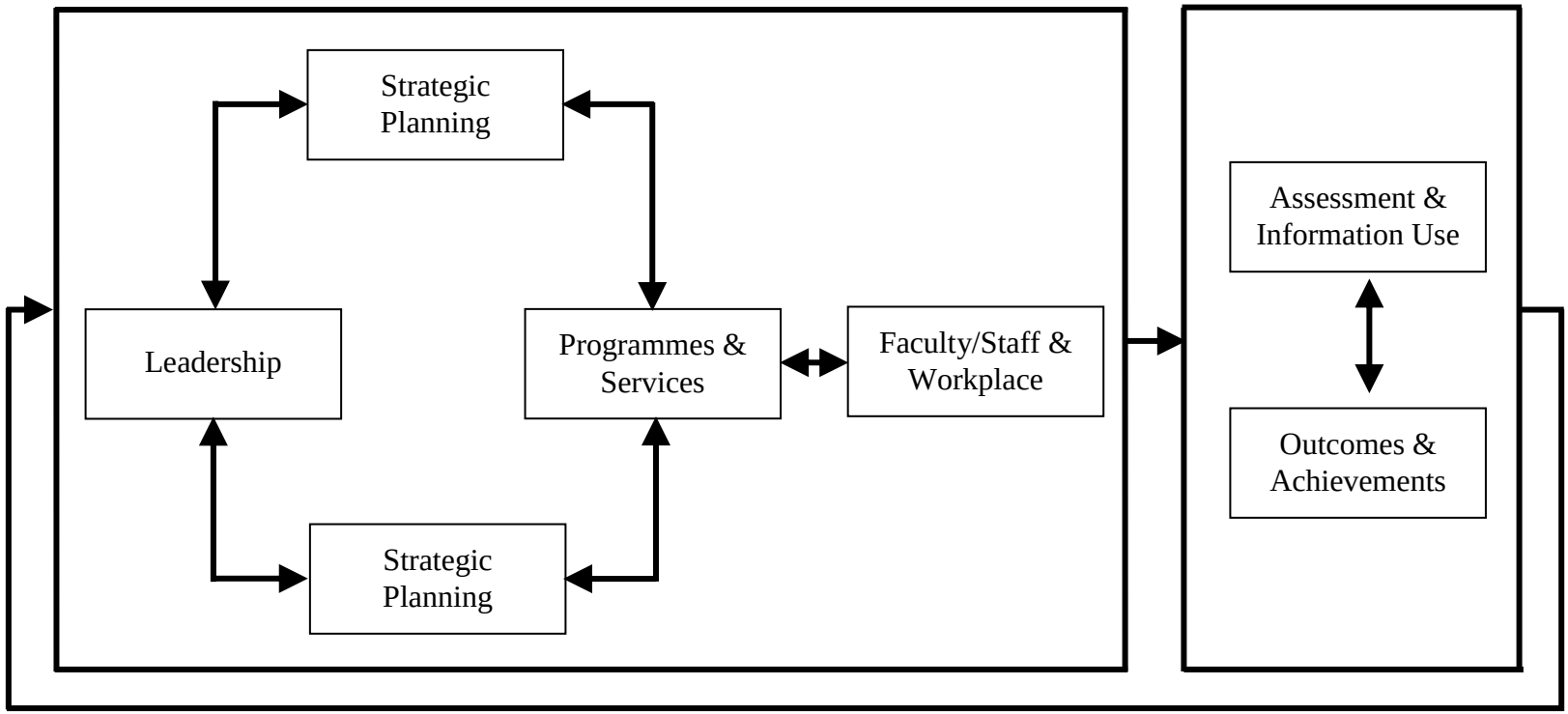
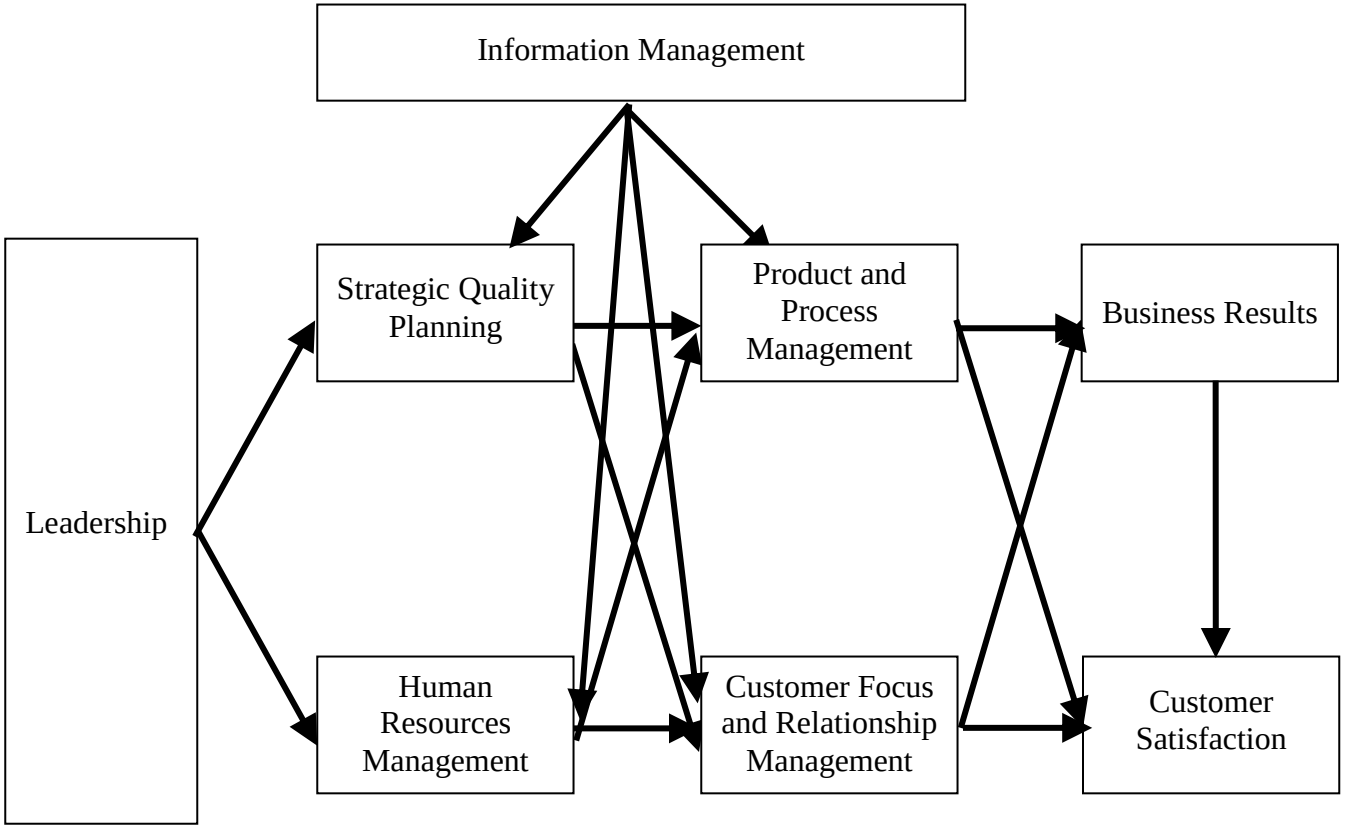


Figure 5.5. Pannirselvum and Ferguson's Model (Pannirselvum and Ferguson, 2001, p. 27).



Pannirselvam and Ferguson's (2001) framework has been taken as the basis for the present study to suggest a framework for the HCT after modifying it by adding the organisational culture criterion and omitting customer satisfaction criterion. On this basis, present study hypotheses were formulated in the light of those suggested by Pannirselvum and Ferguson (2001).

The modified model is illustrated in Figure 5.6 and shows the main hypotheses used in this research except for mediating hypotheses that could not be shown there because this will make the figure very complicated and confusing to the reader.

1. Hypotheses related to Quality Management Infrastructure:

An organisation's quality management procedures and performance relies much on the infrastructure built to support its quality management process (Pannirsalvam and Ferguson, 2001). More specifically, the literature indicates that the MBNQA criteria assert that leadership is the driving force which affects all other components of quality management (Meyer and Collier, 2001; Winn and Cameron, 1998; Pannirselvum and Ferguson, 2001; Flynn and Saladin, 2001). It is also reported the causal influence of leadership on each of the system categories, namely, Strategic Planning, Staff Focus, Process Management and MAKM [and also Results] and that leadership is an overall driver of systems and processes in hospitals (Meyer and Collier (2001). Badri et al. (2006) have recently indicated that the quality-driven leaders have realised the important role of the information systems in providing systems of MAKM. Pannirselvum and Ferguson (2001) maintain that MAKM is essential to effective planning and execution of the plans. Leadership (top management support) has a significant effect on Staff Focus, also referred to in the literature as human resources management, e.g., Flynn et al., 1995, who reported similar findings. This relationship also shows the considerable impact of leadership on training and product quality (Adam et al., 1997). Badri et al. (2006) also indicated that Leadership is an overall driver of Staff Focus in higher education, also reported the impact of MAKM on Staff Focus. It is also indicated that these relationships identify information systems as a critical link in the Baldrige System. Accordingly, the following set of hypotheses has been formulated:

$H_{1.1}$: 'Strategic Planning' is related to 'Leadership' and 'MAKM.

$H_{1.2}$: 'Staff Focus' is related to 'Leadership' and 'MAKM.'

Figure 5.6 shows the relationship between the various quality management infrastructure (the leadership triad) and Measurement, Analysis and Knowledge Management (MAKM).

2. Hypotheses related to the Quality Management Processes:

Hodgkinson and Kelly (2007, p. 78) have recently indicated that the quality of the management processes relies upon "*an understanding of how people learn, how they interact, and how they sustain, develop, or even destroy, a culture.*" They maintain that though understanding is the basis, it is also crucial for well articulated methods of evaluation of the management processes involved. These methods (quality audits or annual monitoring and review) usually involve audit trails that map the extent of consistency of the system, the links between various components, and the closure of feedback loops in the system. Students are HCT's external customers; hence, their satisfaction with the services and courses provided for them, as perceived by the HCT staff, is of paramount importance, given that the satisfaction and dissatisfaction results of students and staff provide very important information for understanding students, staff, and markets. Hence, the following set of hypotheses was formulated:

$H_{2.1}$: 'Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM.'

$H_{2.2}$: The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'

$H_{2.3}$: 'Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'.

$H_{2.4}$: The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'

Figure 5.6 illustrates the relationship between quality management processes (Process Management and Student Focus), Strategic Planning, Staff Focus and MAKM. Figure

5.6 also shows that quality management processes have an indirect relationship with Leadership through Strategic Planning and Staff Focus.

3. Hypotheses related to the Quality Performance:

Staff Focus, Process Management, and Results represent the Results triad. The organisation's staff and key processes achieve the work of the organisation that produces the organisation's overall performance results (Baldrige National Quality Program, 2008). All actions point toward Results; a composite of student, stakeholder, market, budgetary, financial, and internal operational performance results, including staff, leadership, governance, and social responsibility results (Baldrige National Quality Program, 2008). This is clearly depicted in Figure 5.1 (p. 114) and Figure 5.6 (the modified Baldrige model, p. 134). The horizontal arrow in the centre of the framework (Figure 5.1) links the leadership triad to the results triad, a linkage which is critical to organisational success. In addition, the arrow (Figure 5.1) indicates the central relationship between Leadership and Results, and the two-headed arrows indicate the importance of feedback in an effective performance management system (Baldrige National Quality Program, 2008). Figure 5.6 (the modified Baldrige model, p. 134) shows that Results are directly affected by Student Focus and Process management.

There is also an indirect relationship between Results and Leadership as mediated through Strategic Planning, Process Management, Staff Focus and Student Focus. Badri et al. (2006) indicated that Results positively affect Student Focus and Process Management. It was also found that Results has a positive causal influence on Student Focus, according to Meyer and Collier (2001), who indicated (p. 416) that this Results "*relationship supports Baldrige theory that improved internal capabilities and performance results in improved external performance.*" Consequently, the following hypotheses have been formulated.

$H_{3.1}$: 'Results' is related to 'Process Management' and 'Student Focus.'

$H_{3.2}$: The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'Staff Focus' and 'Student Focus'.

Figure 5.6 illustrates the direct relationship between the three 'Results Triad' (Process Management, Student Focus, Results).

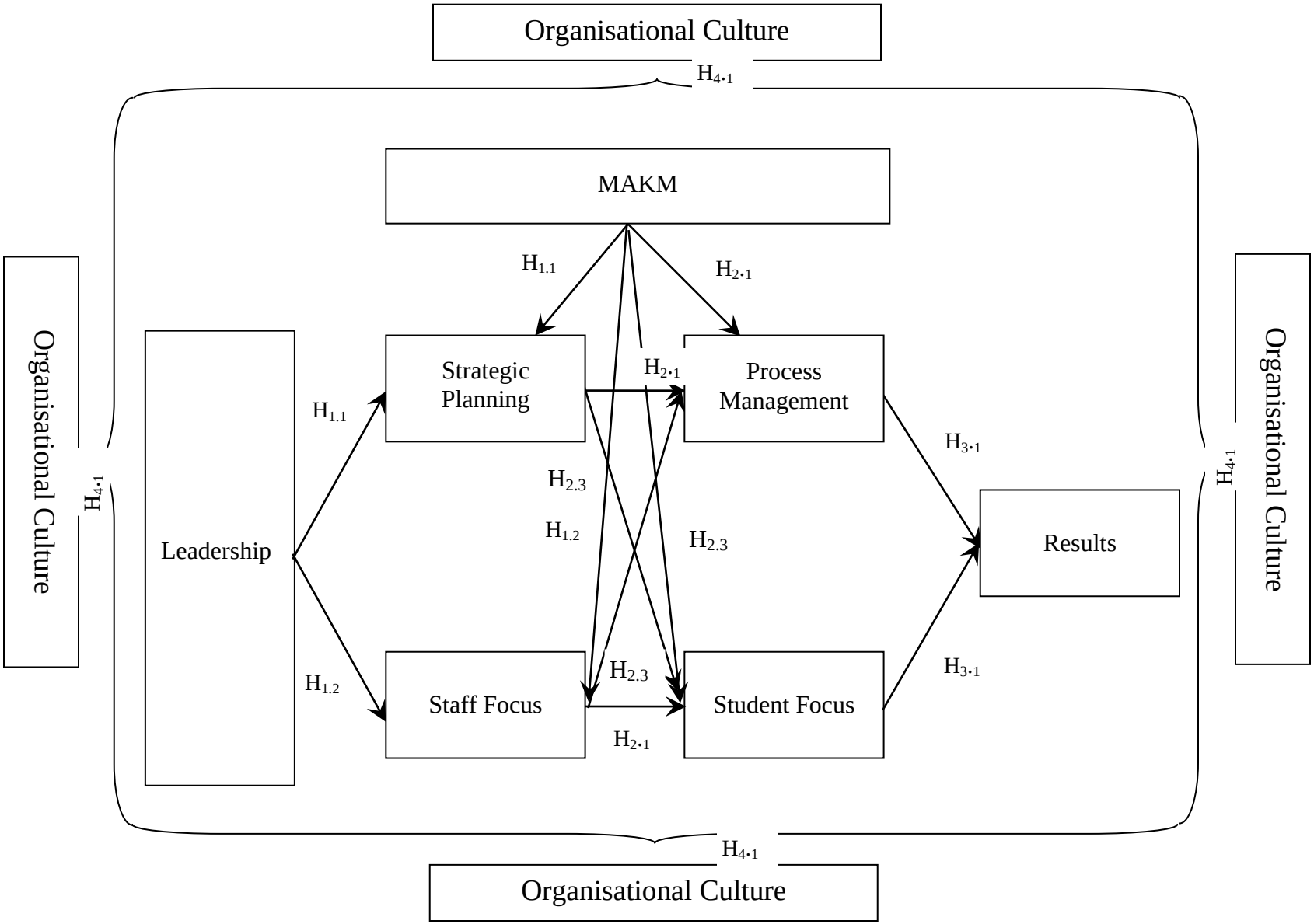
4. Hypotheses related to the Organisational Culture:

The modified model included Organisational Culture as the eighth criterion. Klein et al. (1995) have identified a relationship between quality and organisational culture, arguing that to implement quality management programmes effectively, the organisation's culture should be moulded to the quality method or the quality programme has to be moulded to the organisation's culture. The literature (for example, Bardoel and Sohal, 1999) demonstrates the link between quality improvement programmes and organisational culture. The HCT culture has been described as being a developmental culture, and according to Al-Khalifah and Aspinwall (2000), developmental culture (and also group culture) are perceived as being ideal for quality management. The literature (Dellana and Hauser, 1999; Prajogo and McDermott, 2005) indicates developmental culture and group culture, when using the Baldrige model, are linked to higher level of the Baldrige framework practices. The significance of culture in understanding total quality management is also widely supported in the literature which have encouraged the acceptance and recognition of the organisational culture construct within quality management, especially as a primary requirement for its successful implementation (Maull et al., 2001). In order to test the impact of organisational culture on the other seven criteria and its relationship with these seven criteria, the following hypothesis was formulated.

$H_{4.1}$: *There is a relationship between 'Organisational Culture' and 'Leadership', 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'.*

Figure 5.6 depicts the impact of culture on the whole system.

Figure 5.6. Modified model



5.4.4 Survey Method

This method is generally associated with the deductive approach (Saunders et al., 2007). Deduction involves the development of a theory which is subjected to a systematic test, and as such it is the dominant research approach in the natural sciences in which laws provide the basis of explanation, allow the anticipation of phenomena, and envisage their incidence; hence, allow them to be controlled (Collis and Hussey, 2003; Saunders et al., 2007). The survey method is claimed to be most employed to "*answer who, what, where, how much and how many questions.*" (Saunders et al., 2007, p. 138). It is popular as it allows the collection of substantial amount of data from a large population in a highly inexpensive way, and is often obtained by using a questionnaire administered to a sample, and such data are standardised; thus, allowing easy comparison (Saunders et al., 2007).

Survey method was employed to gauge the responses of HCT staff and students. A questionnaire-based survey was used for this purpose, in which questionnaires were sent electronically to all staff and students and received electronically after completion. This procedure ensured high questionnaire return rate. The electronic questionnaire was designed in a way that respondents have to answer all questions before submission is accepted.

5.4.4.1 The Questionnaire

A questionnaire is a "*method of obtaining specific information about a defined problem so that the data, after analysis and interpretation, result in a better appreciation of the problem*" (Chisnall, 1997). Chisnall suggests that questionnaires are important elements of the total research design. Its preparation and administration require considerable professional expertise. The use of questionnaires is very common in the social sciences, and in most cases, they are the only method employed for data collection, while in some others it is used in addition to other methods (Sarantakos, 2005).

Questionnaires are widely used to collect quantitative data and in testing hypotheses or answering questions. They are used to collect data that are unavailable in written records or cannot be readily observed (Lewis-Back, 1994). They offer an objective means of collecting information about people's knowledge, beliefs, attitudes, and behaviour (Sapsford, 1999; Oppenheim, 2000).

The selection of the questionnaire as the main quantitative data-generating instrument is due to its advantages. Advantages are: questionnaires are less expensive than other methods; they produce quick results; they can be completed at the respondent's convenience; they offer greater assurance of anonymity; they offer less opportunity for bias or error caused by the presence or attitudes of the interviewer; they are a stable, consistent and uniform measure; they offer an objective view on the issue, since respondents can consult their files and since many subjects prefer to write rather than talk about certain issues; their use promises a wider coverage, since researchers can approach respondents more easily than by other methods; and they are not affected by problems of 'no-contacts' (Sarantakos, 2005).

5.4.4.2 Questionnaire Design

5.4.4.2.1 HCT Staff Questionnaire

The questionnaire used in the present study is based on the Malcolm Baldrige Education Criteria for Performance Excellence categories listed by Badri et al. (2006). Badri et al. (2006) explored only the perception of leadership of the Malcolm Baldrige criteria. In the present study, the perception of HCT staff with the Baldrige seven categories, as well as an eighth category, that is, organisational culture, are explored.

The researcher of the present study selected the items relevant to the study. Questionnaire items were then developed, in the light of the data and information identified in the literature search and to help achieve the study aim and objectives with focused, but informative items. According to Hussey and Hussey (1997) and Zikmund (2003), the questionnaire needs to as simple as possible and easy to understand, the

language level must approximate the respondents' level of understanding; the purpose of each question should be carefully considered and measured; the purpose of the questionnaire needs to be explained to all respondents; and the questionnaire has to be short, especially if it is designed for a postal survey (Hussey and Hussey 1997; Zikmund 2003), and in our case, electronic survey, for example, Web page and e-mails. The Baldrige model questionnaire items, which Badri et al. (2006) have formulated from the Baldrige Model, before selecting those used in the present study are listed in Appendix I. Items selected for the present study are marked with an asterisk (*). An example of this selection is presented in Table 5.4. For details, see Appendix I.

Table 5.4. A sample of the items selected (denoted by *) and those not selected.

1.	Senior leaders create strategic directions*
2.	Senior leaders communicate a clear vision*
3.	Senior leaders guide in setting organizational values
4.	Senior leaders set specific action plans for successful implementation of strategic objectives
5.	Senior leaders show strong commitment to policies and strategies*
6.	Senior leaders guide in setting performance expectations
7.	Senior leaders continuously communicate with staff and faculty*
8.	Senior leaders continuously address the needs of students and community
9.	Senior leaders create an environment characterized by ethical behavior
10.	Senior leaders create an environment that encourages learning
11.	Senior leaders create an environment that takes into account key development needs of students, staff and faculty
12.	Our governance system ensures accountability of staff and faculty members
13.	Our governance system ensures monitoring the performance of our senior leaders*

The final version of the questionnaire was prepared in a way that fits within the HCT context and the study aim and objectives. The pilot study is the place to judge

respondents' interest and attention (Burton, 2000). The piloting study is carried out to measure the difficulty of the questions and the difficulty in accessing to the respondents. For the researcher, accessibility was not at all a problem given the fact the researcher has discussed the questionnaire with some of the HCT staff prior to formulating the final version of the questionnaire. A pilot study is often a miniature of the main study (Chisnall, 1997), designed to test research instruments, in order to estimate the level of reliability and validity, as well as to determine the clarity of items and questions, and to help identify the statistical methods used for the analysis of data generated by the research instrument. A pilot study or a pre-test is designed to check the suitability of the questionnaire as a whole (pilot study) or of some aspects of it (pre-test) (Sarantakos, 2005). Bell (2005, p. 84) defines a pilot study as a:

> "*Getting the bugs out of the instrument (questionnaire) so that subjects in your main study will experience no difficulties in completing it and so that you can carry out a preliminary analysis to see whether the wording and format of the questions will present any difficulties when the main data are analysed*."

Accordingly, there was no need to undertake any piloting and testing for the questionnaires used. A seven point Likert system was used to help respondents express their extent of agreement or disagreement with the questionnaire items. However, for Organisational Culture items, it was necessary to pilot them in order to substantiate the validity and reliability of the items. This is due to the fact that Organisational Culture criterion was added by the researcher to the existing seven Baldrige criteria. The items were sent to ten academic and administrative staff members who were asked to indicate the appropriateness of the items. The ten staff members did not make any changes; hence, the Organisational Culture items were added to the questionnaire.

The final version of the questionnaire was distributed to HCT's staff respondents electronically. A copy of this questionnaire is presented in Appendix II.

The Malcolm Baldrige Education Criteria for Performance Excellence categories, mentioned before comprise seven criteria, as follows: Leadership, Strategic Planning, Student Focus, Measurement, Analysis and Knowledge Management (MAKM), Process

Management, Staff Focus, and Results. As indicated earlier, an eighth criterion, that is, Organisational Culture, was added by the researcher to the seven criteria.

5.4.4.4.2 Students' Questionnaire

A second questionnaire, aimed at students, was formulated based on the SERVQUAL Questionnaire. A nine point Lickert scale was used to help students express their views with the SERVQUAL questionnaire, classified as follows: '1-3, Lower than my desired service level'; '4-6, Same as my desired service level', and 7-9, higher than my desired service level. This questionnaire is based on that used by Djebrani et al. (in press), who have piloted and tested it for its validity and reliability. Hence, there was no need to pilot and test the questionnaire used in the present study. This questionnaire was formulated into two parts. Part one asked questions relating to students' impression about the HCT's service performance in relation to students' expectations. Part Two includes questions relating to personal information. A copy of this questionnaire is presented in Appendix III.

SERVQUAL has been employed widely to assess the quality of private sector services, though less so in the public sectors. According to Connolly and Bannister (2008, p. 314), SERVQUAL has been widely cited in the literature and has been used to measure service quality in a variety of settings. For example, it has been used in education (Badri et al., 2005; Ekinci and Riley, 1999; Kwan and Ng, 1999; Oldfield and Baron, 2000; Ruby, 1998; Smith et al., 2007; Soutar and McNeil, 1996; Stodnick and Rogers , 2008; Yang et al., 2006); public services (Carman, 1990; Orwig et al., 1997; Flynn, 2000; Brysland and Curry, 2001; Wisniewski, 1996, 2001; Jabnoun and Khalifa, 2005; Donnelly et al., 2006; McKoy, 2006; Sullivan and Estes, 2007; Connolly and Bannister, 2008); banking (Angur et al., 1999; Avkiran, 1999; Lassar et al., 2000a, b; Newman, 2001; Siu and Mou, 2005; Tahir and Abu Bakar, 2007; Zhu et al., 2002); hospitality sector (Badri et al., 1999; Hudson et al., 2004; Ingram and Daskalakis, 1999; Dean and White, 1999; Gabbie and O'Neill, 1996; Sahu, 2006; Saleh and Ryan, 1991); Telecommunication (Kettinger and Lee, 1999; Lai et al., 2007; van der Wal et al., 2002); health care (Reidenbach and Sandifer-Smallwood, 1990; Babakus and Mangold, 1992;

Bowers et al., 1994; Bebko and Garg, 1995; Lam, 1997; Andaleeb, 1998; Dean, 1999; Lim and Tang, 2000; Black, 2001; Hasin et al., 2001; Curry and Sinclair, 2002; Wong, 2002; Clark and Clark, 2007); professional services (Bojanic, 1991; Hoxley, 2000; Philip and Hazlett, 2001; Kang et al., 2002; Ueltschy et al., 2007); retailing (Finn and Lamb, 1991; Mehta et al., 2000; Gaur and Agrawal, 2006); catering (Johns and Tyas, 1996), transportation and shipping (Durvasula et al., 1999; Sultan and Simpson, 2000; Frost and Kumar, 2001); and also other applications.

Despite the criticisms aimed at the SERVQUAL scale, this scale using the expectation/performance gaps method is a richer approach to measuring service quality, and it has been indicated that service quality is a multidimensional rather than a unidimensional construct (Parasuraman et al., 1985, 1988, 1994). Nonetheless, though Asubonteng et al. (1996) has criticised SERVQUAL, they that until a better but equally simple model emerges, SERVQUAL will predominate as a service quality measure".

In addition, Brysland and Curry (2001) indicated that a specific advantage of SERVQUAL is that it is a tested and assessed instrument that can be employed comparatively for benchmarking purposes. Shahin (2005, p. 6) argues that SERVQUAL benefit from being a statistically valid instrument due to extensive field testing and refinement; hence, It escapes the pitfall of being perceived by service users and providers as "something that has been invented off the top of the head" or a questionnaire that has been skewed to elicit certain types of response.

The researcher coordinated with the Quality Department regarding the next stage of research, namely, the formulation of the questionnaires for staff and students. The researcher met some of his colleagues at the HCT to review the questions and to establish the extent of their acceptance throughout the questionnaire stage.

5.4.5 Content Analysis

Krippendorf (2004, p. xiii) refers to content analysis as "*potentially one of the most important research techniques in the social science.*" He (p. 18) refers to content

analysis as *"a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use.*" This definition, according to Green (2004), includes three essential aspects of content analysis, the findings from a content analysis must be capable of being replicated by others; the analysis needs to measure what it claims to measure; and content analysis is not limited to textual data.

A reactive content analysis will be carried out in Chapter Six, Part One, using HCT materials including archived documents. In the mean time, further active content analysis will be generated through semi-structured interviews and analysed qualitatively.

Collection of quality literature as a whole and in particular concerning quality assurance applications in higher education institutions will be reviewed. The quality programme currently implemented by the HCT will also be reviewed. Content analysis will help describe the current quality programme implemented at the HCT.

5.4.6 The Interview

The interview is the primary means of accessing the experiences and subjective views of actors. It is undoubtedly the most widely qualitative method in organisational research, being a highly flexible method and can be employed almost anywhere, being capable of producing data of great depth (King, 2004). Its flexibility enables researchers to open new dimensions of their problems or to discover clues connecting their different elements (Whipp, 1998).

Fontana and Frey (1994) identify three types of interviews: structured, semi-structured and unstructured, whereas May (1997) adds a fourth type, that is, group interviews.

Interviewing HCT management also helped describe the current quality programme implemented at the HCT and analyse its content.

May (1997) maintains that the theory behind the interview method is to ask each person in the same way so that differences between answers are then presumed to be real and

not the result of the interview situation itself. Consequently, the structured interview method is claimed to allow comparability between responses, and relies upon a uniform structure. Denzin (1989, p. 104) used the term 'scheduled standardised interview' (SSI) to refer to structured interviews, maintaining that the:

> "*wording and order of questions are exactly the same for every respondent, the purpose being to develop an instrument that can be given in the same way to all respondents.*"

Opting for employing interview techniques is a very important decision relating to the nature of UAE society. Managers tend to prefer to be interviewed rather than filling in questionnaires. Furthermore, the interviewer can get better response; and hence, better information from interviewees than from questionnaires, since, the interviewer can ask follow-up questions during the interview (Saunders et al., 2007). This is not possible using a questionnaire. Interviews are also more acceptable and more understood than other research techniques.

In the light of the above outline of qualitative research and a literature review relating to the topic of the present study, it seemed appropriate to discuss the necessary questions with a small sample of people through direct interviews. Accordingly, it was decided to plan a series of semi-structured interviews to obtain the views and ideas of the interviewees, due to the fact that this type of interview is undertaken with a reasonably open framework that allows for focused, relaxed, two-way communication, and they can also be used both to give and receive information (FAO, 1990).

It is argued that this interview method is one which allows respondents to express their views directly and also to make suggestions rather freely without being bound to respond to specified answers, as is the case when questionnaires are used or when a set of closed questions is provided. At the design stage, it was hoped that our interviews would help identify further problems as perceived by the interviewees, whose professional experience and daily contact with the subject under investigation would be

of great value in establishing the extent of the difficulties referred to and the actual response to them in current practice. The direct approach of this study is believed to have the potential to generate the emergence of helpful ideas about future developments in the implementation of current quality programme within the HCT.

The interview approach is adopted also because interviews are often superior to other data-gathering tools as they tend to capture the personal reflection of the interviewees. It seems that people are often more open and honest in speaking with others face to face than when they are asked to make a written response. Information given orally in a situation of personal contact is of greater importance to both interviewer and interviewees than written replies (Borg and Gall, 1989). Interviews are described as unique because they involve the collection of data which has personal reference. The interview used in this way is an essential scientific instrument, which is commonly utilised. The method is very effective when collecting data in educational research where the quality of directness which it gives to opinions and views conveys something of the personality and the passions of those interviewed. The uniqueness of expression achieved through this method is often apparent because it encourages the emergence of fine points, which tend to be lost in impersonal forms of enquiry, such as the questionnaire. However, combining this technique with quantitative approaches, using a questionnaire, will substantiate the quantitative findings and provide an in-depth information about the issues considered, as interviews frequently permit a much greater depth of enquiry than other methods of generating research data (Borg and Gall, 1989), because respondents can often be more willing to talk than to write (Best, 1980). Best also maintains that interviews can also help researchers to 'establish' a friendly and secure relation with their interviewee and this allows more sensitive types of information to be provided more easily (Cohen and Manion, 1994). These authors usefully explain the contribution of the interview to research technique in terms of three possible purposes: (i) as a principal means of gathering information with direct bearing on the research objectives; (ii), as a means of testing hypotheses or suggesting new ones; and (iii) as a device which helps the detailed identification of variables and relationships. They also show how the interview can be used in conjunction with other methods in a

research undertaking. The present study followed these links, since other research tools were also used.

As far as the focus of the interviews was concerned, the present work involves a number of interviewees, covering a wide range of expertise and specialisations relating to the study. The questions formulated were of two types: general, addressed to all participants irrespective of their field of expertise and specialisation; and specific, addressed to individual interviewees in line with their expertise and specialisation, such as those other participants could not answer.

The researcher met some of the HCT's senior managers to obtain information about the staff whom he could interview at this stage and those who occupy senior positions at the HCT. In the meantime, the researcher also met members of the Quality Department and sought their help in formulating the questions that senior official would possibly be asked about concerning the currently implemented quality programme, as well as obtaining general information about the system which enables making decisions, and whether or not it is feasible that other quality systems can be implemented.

The researcher had the opportunity to meet the HCT's Vice Chancellor who was briefed about the situation and the possibility of assisting the researcher in terms of facilitating his task concerning interviewing managers in the Colleges. The Vice Chancellor's help played a major role in interviewing managers by instructing one of the Administration's directors to nominate managers who can possibly be interviewed.

After having managers' names, a letter was sent to them via the Vice Chancellor's Office to facilitate the researcher's task and to arrange for interviewing them. The researcher made the necessary contacts with the managers to be interviewed and set appointment dates with them.

5.5 Research Management

The research was undertaken across the following stages.

Stage 1. Quality Literature Review.

At this stage, a review of the relevant quality literature was undertaken. The researcher spent a long time in collecting and reading large volume of published academic and professional articles in academic and professional journals, text-books and organisations. This resulted in the production of two chapters (Chapters Three and Four) reviewing various aspects of quality and performance measurement systems in higher education, for example, Baldrige National Quality Program, the Deming Prize, and the European Foundation for Quality Management (EFQM) Business Excellence in Higher Education, as well as reviewing literature relevant to service quality and customer satisfaction, retention and loyalty as well as employee satisfaction. Organisational culture literature was also reviewed.

Reviewing the literature helped the researcher formulate the two questionnaires used in the collection of quantitative data from staff and students.

Stage 2. Investigating current quality programme implemented by HCT.

At this stage, current quality programme implemented by the HCT was investigated and discussed both quantitatively and qualitatively; quantitatively through using questionnaires, and qualitatively, using content analysis and undertaking semi-structured interviews:

(a) Questionnaire Formulation and Distribution. The staff questionnaire formulated was based, as indicated earlier, on the Malcolm Baldrige Education Criteria for Performance Excellence categories, with a further category added; namely, organisational culture. The student questionnaire was formulated based on the SERVQUAL questionnaire. The researcher visited the HCT and met some

managers to explain to them the possibility of using the HCT Website to distribute the questionnaires electronically. This step was necessary due the large numbers of staff and students which makes it rather difficult to select a representative sample in a short period of time and to send the questionnaire to them. The researcher also believed that by doing so he would collect large number of responses that would help produce both reliable and valid data which facilitate generalisations to the whole population. The findings of the two questionnaire surveys are analysed and discussed in Chapters Six and Seven.

(b) Content analysis. In order to undertake such an analysis, the author collected all material, published by the HCT, concerning the Program Quality Assurance, the currently implemented quality programme, analysed it and discussed its strengths and weaknesses. PQA content analysis is discussed in Chapter Six, Part One.

(c) Interviewing HCT management, using semi-structured interviews. The researcher spent some time contacting the top management to explain his work and seek their help in interviewing managers concerned with the implementation of quality programme, as explained in the following section. Interview findings are analysed and discussed in Chapter Six, Part Two. A total of eighteen managers were interviewed. However, in Chapter Six, Part Two, only five interviews were analysed. This was due to the fact that these five interviews reflected some of the differences in their responses, whereas the remaining thirteen referred similarly to the questions asked. This means that five out of eighteen interviews were used.

5.6 Steps Undertaken Prior to Carrying Out Field Survey

Prior to undertaking interviews and distributing the questionnaires, the researcher made important contacts with the HCT administration in order to explain his work and how managers can help him undertake this task.

5.6.1 Interviews

As indicated earlier, the researcher met some of the HCT's senior managers to obtain information about the staff whom he could interview at this stage and those who occupy senior positions at the HCT.

The researcher had first to make appointments with managers in remote areas and commute to their offices; then appointments were made for areas nearer to where the researcher lives. The process of interviewing took one month during which time eighteen interviews were undertaken.

5.6.2 Questionnaires

As indicated earlier, the researcher coordinated with the Quality Department regarding the formulation of the questionnaires for staffs and students. The researcher met some of his colleagues at the HCT to review the questions and to establish the extent of their acceptance throughout the questionnaire stage.

The researcher liaised with the Computer Department about the feasibility of distributing questionnaires electronically. The questionnaires were then sent electronically to all of the HCT staff and students.

The researcher also made field visits to all HCT colleges and departments and also to quality staff and helped some of the staff and students in responding to the questionnaire items. Response by staff and students was sufficient.

5.7 Statistical Analysis of Data

Data generated using staff and student questionnaires were statistically analysed using SPSS Version 15. Statistics used included descriptive statistics, correlations, partial correlations, and ANOVA analysis.

CHAPTER SIX

QUALITATIVE ANALYSIS

This chapter is divided into two parts. In Part One, the content of the HCT's Program Quality Assurance is analysed. In Part Two, qualitative data generated from interviews with HCT management are analysed and discussed.

PART ONE

PROGRAM QUALITY ASSURANCE: CONTENT ANALYSIS

6.1 Introduction

The HCT states that it is committed to maintaining the highest quality in all its programmes, and has a rigorous Program Quality Assurance (PQA) system in place for this purpose (HCT, 2006a). The PQA is fundamentally a process-based model (Institutional Effectiveness Directorate, 2003a). As part of the PQA system, the HCT Learning Model defines seven graduate outcomes to be achieved through each program, and in turn these outcomes are evaluated annually. Besides, the PQA system incorporates an annual review of the colleges' program quality assurance work, employing seven Key Criteria and three key questions (HCT, 2006a). Scott (2001) argues that quality review activities can be perceived as a remarkable force for improvement that is regarded as imperative by the staff involved. Accordingly, the task is to set up a system in which staff value quality management work as relevant and contributing to their basics of their work (Martin. 1999, in Wahr et al., 2002) and that this is also considered and strengthened always across the organisation's systems (Senge, 1990, in Wahr et al., 2002). Most importantly, the benefits in engaging in

quality activities must outweigh the costs and be perceived as doing so by all the stakeholder groups.

6.2 HCT's Program Quality Assurance (PQA)

The Program Quality Assurance Committee, which is one of the standing committees of the Academic Council, is charged with the development and operation of an effective Program Quality Assurance (PQA) System, and reporting annually to the Academic Council on academic quality in the HCT (HCT, 2005a). The program annual report is a management tool with several functions (Wahr et al., 2002) that provides a common structure upon which to establish teaching and learning communication within the colleges; demonstrates program achievements of and/or progress towards PQA referenced goals (criteria); is a planning tool for the Program Team; helps accessing current colleges' resources for program improvement and enhancement; provides a supplementary measure/set of data that informs college planning for future program offerings; and when compiled across all programs, provides report data which can be utilised to establish suitable organisational resource planning allocations for program outcomes improvement.

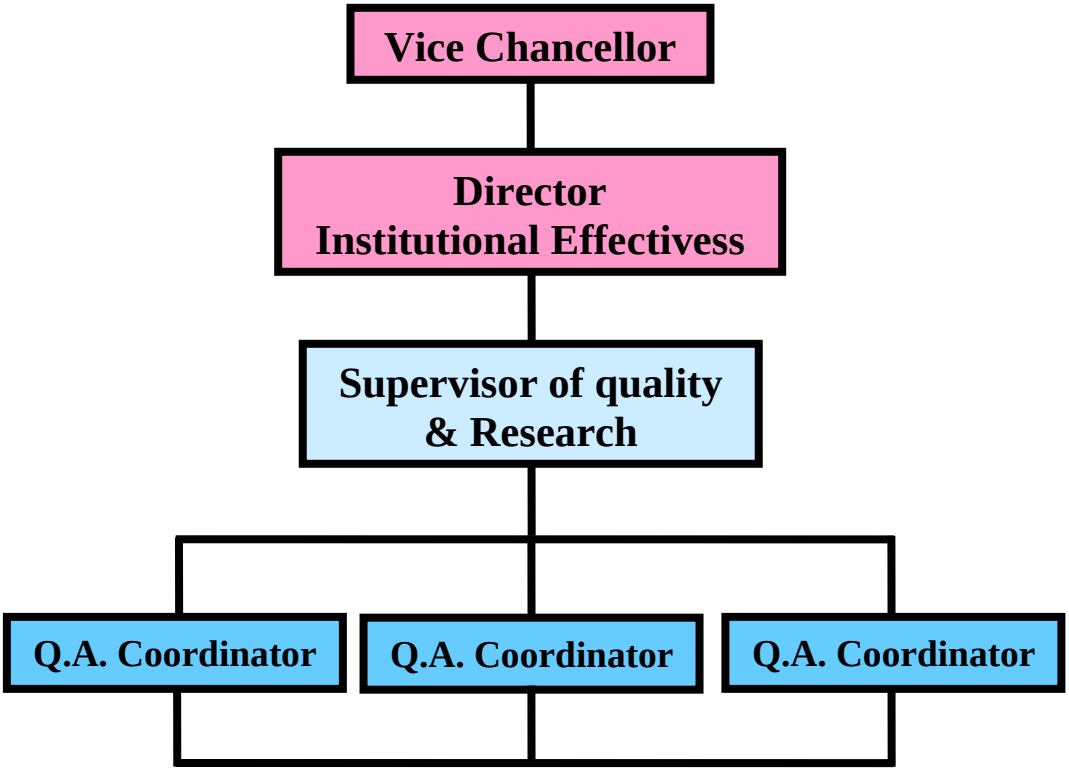
Quality assurance programmes implemented by the HCT is the responsibility of the Institutional Effectiveness Directorate (IED), which one of the directorates directly affiliated to the HCT's Vice Chancellor, as illustrated in the Figure 6.1.

The IED Vision, as stated in the IED (2003a, p. 7), stipulates the following:

> "*To have the best Institutional effectiveness program in the education sector in the UAE and have it accepted as a model internationally.*"

This vision envisages creating one of the best higher education institutions in the UAE whose graduates have good education that is accepted at the international level.

Figure 6.1. IED Organizational Chart (Institutional Effectiveness Directorate, 2003a, p. 6)



Institutional Effectiveness process, as defined by the Institutional Effectiveness Directorate (2003a, p. 8), is the "*means by which the institution critically evaluates its own performance and provides information needed for improvement.*"

The IED Mission, on the other hand, stipulates the following (Institutional Effectiveness Directorate, 2003a, p. 7):

> "*To create and operate an Institutional Effectiveness program for the HCT that uses factual data to enhance the quality of service and outcomes of the operations of the HCT.*"

The effectiveness process should be systematic and ongoing, and be integrated into the work of all part of the institution and not be added on for the purpose of accreditation. This is a clear reference to the fact that the quality process within the HCT is continuous,

rather than an addition to obtain accreditation (Institutional Effectiveness Directorate, 2003a, p. 8).

The IED Goals are as follows (Institutional Effectiveness Directorate, 2003a, p. 7):

1. *To ensure continuous quality improvement to help HCT in all Academic and Support processes of the HCT.*

   Academic processes are structured into the following functional areas: Academic Affairs, Learning Resource Services, Central Academic and Student Services, and Institutional and Learning Effectiveness (HCT, 2006c).

   Support processes are run by the Central Services and include the following: Community Relations & Manpower Development (CRMD), Marketing and Public Relations, Finance and Accounting, Human Resources, Information and Telecommunication Services**,** and Procurement and Contracts. Academic and support processes are explained briefly in Appendix I.

2. *To identify strengths and areas of improve to help HCT achieve its Mission.*

3. *To use external accreditation and benchmarking best practices to ensure that HCT achieves international quality standards in all operations.*

   This is very useful in guaranteeing that degrees awarded by the HCT are approved and recognised internationally.

4. *To identify and carry out research that will inform the HCT's decisions in strategic planning and quality assurance systems.*

5. *To operate, maintain and improve an HCT program quality assurance model as a component of the overall assessment of institutional effectiveness.*

6. *To advise the Chancellor and Vice Chancellor on the achievement of standards of effectiveness for all parts of the HCT.*

Quality assurance programme implemented at the HCT includes both External Quality Assurance (SACS) and Internal Quality Assurance (PQA), as illustrated in Figure 6.2.

The External Quality Assurance consists of Institutional Accreditation, and Program Benchmarking Key Criteria 2. The Internal Quality Assurance (PQA) consists of Program Quality Assurance (PQA) Key Criteria 1-7, and Graduate Outcomes (GO) Key Criteria 7 (Institutional Effectiveness Directorate, 2003a).

Institutional Accreditation is based on the Southern Association of Colleges and Schools (SACS). The SACS is one out of six USA regional accrediting agencies, which ranks second to North Central Agency in terms of the number of degree awarding institutions. SACS has 800 institutions, whereas North Central has 1,000 institutions (Institutional Effectiveness Directorate, 2003a).

A set of Core principles and Comprehensive Standards have been developed by SACS and its member institutions, which form the basis of its accreditation approach. In theory, these principles represent 'guidelines', a sort of best management practices, for a college to follow rather than absolute 'musts'. Nonetheless, a college should wholly justify each deviation and difference, and hope that evaluating college faculty members and staff accept such justifications (HCT, 2005b). However, to further complicate the issue for both the evaluators and HCT faculty members and staff are that aspects of the HCT's educational programmes differ from those typically found in the USA. SACS faculty guidelines require the following (HCT, 2005b):

> "*When determining acceptable qualifications of its faculty, an institution gives primary consideration to the highest earned degree in the discipline in accordance with the guidelines listed below. The institution also considers competence, effectiveness, and capacity, including, as appropriate, undergraduate and graduate degrees, related work experiences in the field, professional licensure and certifications, honors and awards, continuous documented excellence in teaching, or other demonstrated competencies and achievements that contribute to effective teaching and student learning outcomes. For all cases, the institution is responsible for justifying and documenting the qualifications of its faculty.* (underlines added for emphasis).

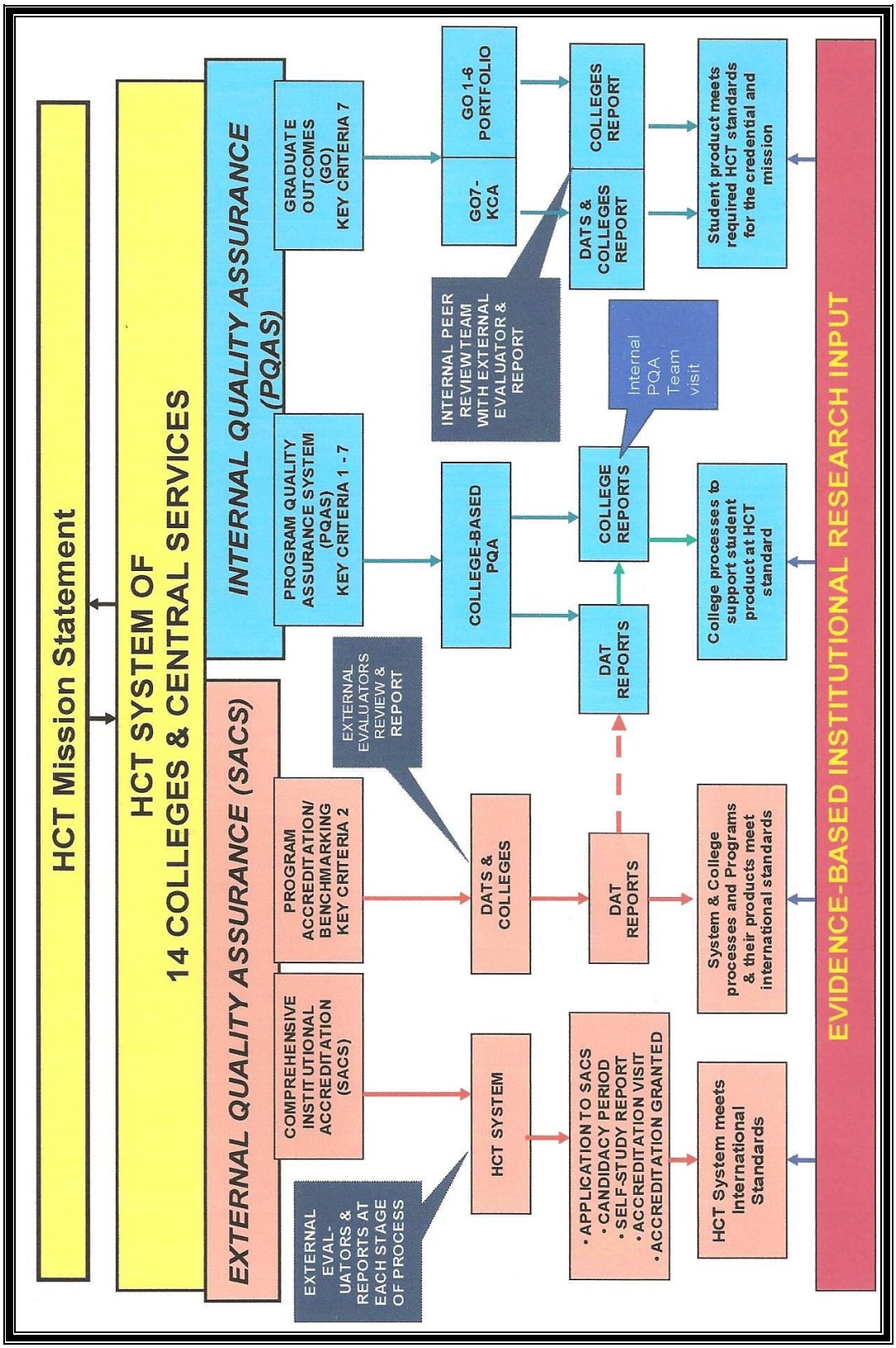


Figure 6.2. HCT's External and Internal Quality Assurance

The statements below summarise the credentials SACS require of all faculty (full and adjunct) at various programme levels applicable to the HCT:

1. Baccalaureate program courses: Doctors or masters in the teaching discipline, or masters with a concentration in the teaching discipline (18 graduate semester hours in the teaching discipline). Twenty five percent (or more) of the courses in the discipline must be taught by faculty with terminal degrees.

2. Higher Diploma program courses (which are primarily a pathway to the baccalaureate): Doctors or masters in the teaching discipline or master's with a concentration in the teaching discipline (18 graduate semester hours in the teaching discipline).

3. Higher Diploma program courses (which are not primarily a pathway to the baccalaureate): Batchelor's degree in the teaching discipline, pr associates degree (higher diploma) and demonstrated competencies in the teaching discipline.

4. Diploma program courses: No specific academic credential requirement is mentioned. However, if a diploma program is primarily a pathway to the higher diploma, then requirements for those courses would logically apply.

5. Foundations: No specific academic requirements are mentioned. However, American colleges would seldom employ a faculty member to teach foundations with less than a bachelor's degree in the teaching discipline

6. General education courses: Doctors or masters in the teaching discipline or master's with a concentration in the teaching discipline (18 graduate semester hours in the teaching discipline).

The HCT have a quality assurance programme, known as 'Program Quality Assurance' (PQA) system. This system is a component of fundamental importance in the HCT's overall quality assurance processes and activities.

6.3 Aims of the PQA

The primary aims of the PQA system are to (Higher Colleges of Technology, 2005):

- Contribute towards improvements by colleges and Divisional Academic Teams in providing students with the best opportunities for academic and personal success

- Provide a framework for colleges and Divisional Academic Teams to report how they are contributing towards the HCT achieving its mission

6.4 Key Principles

The HCT expects the following principles to be evident in all PQA work (Higher Colleges of Technology, 2005):

1. Student Learning and Success: Improved student learning and each student's academic and personal success are paramount.

2. Continuous Quality Improvement. Reflection on curricula improvements is continuous and inherent to the daily activities of academic staff.

3. Key Criteria. Colleges and divisional academic teams evaluate how they can improve programs according to the HCT's PQA key criteria.

4. Processes, Evidence and Analysis. Recommendations for curricula improvements result from PQA processes that provide good evidence for analysing curricula quality.

5. Stakeholder Consultation to Define and Evaluate Quality. For each program, a broad range of people should be actively involved in defining quality and

evaluating how this is being achieved. This range will include people from relevant industries and local communities, as well as from within the HCT.

6. College Staff and Divisional Academic Team Ownership of PQA Processes. Academic staff in each program will actively report on how his or her program responds in unique as well as common ways to the PQA Key Criteria.

6.5 HCT PQA Key Criteria and Key Questions

Each college and its Divisional Academic Teams (DATs) use HCT PQA Key Criteria to evaluate the quality of its PQA processes and activities and how these can be improved.

A college, for each program that it offers, is individually responsible for demonstrating how the following Key Criteria are satisfied, as illustrated in Figure 6.3:

KC1 Industry and community satisfaction with the program.

KC4 Student performance in assessment and progression through the program.

KC5 Student and graduate satisfaction with teaching, learning and assessment.

KC7 Course delivery and teaching, learning and assessment strategies: ensuring these are aligned with KC3.

Each Divisional Academic Team is responsible for demonstrating how the following Key Criteria are satisfied for each of the programs in its division:

KC2 Professional and external bench marking, status and recognition of the program.

KC3 Program and course aims, design, and learning outcomes: ensuring that they are aligned with the HCT Graduate Outcomes.

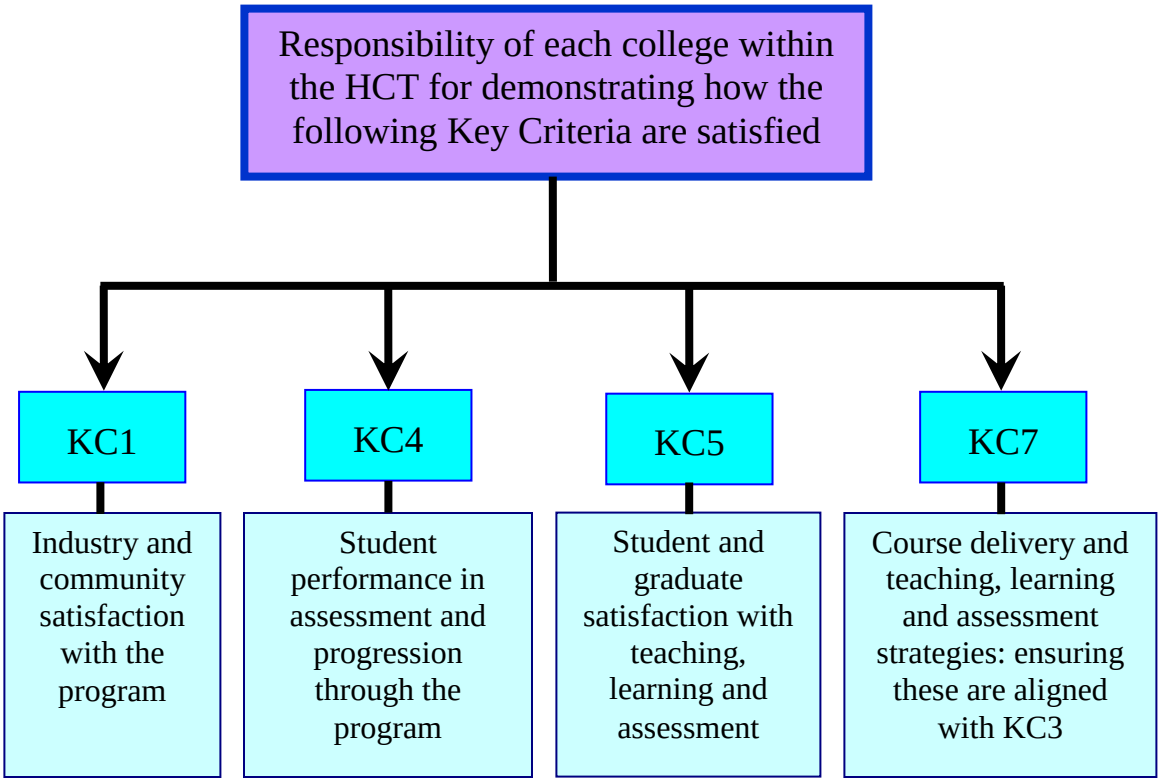
Each DAT and relevant college is jointly responsible for demonstrating how the following Key Criterion is satisfied:

KC6 Optimization of resources and resource issues for the program and courses.

The PQA process is carried out by Five-yearly Major Review, and Internal Accreditation.

Operating in parallel with the above PQA system is an *annual assessment* of how well graduates meet the HCT Graduate Outcomes.

Figure 6.3. HCT's Key Criteria



Each college annually demonstrates student achievement of the HCT Graduate Outcomes in each of its programs through (Higher Colleges of Technology, 2005):

(i) Results from Key Common Assessments in English, Math and Computing (and any other common, system-wide assessments required by each Divisional Academic Team)

(ii) Outcomes assessments including, where appropriate, associated assessment products and grades from the portfolios of final-year students

A discipline-specific Academic Quality Team: Assessment Development Process (AQT:ADP), which includes DAT and General Education Division representatives, and an external advisor, evaluates (i) and (ii) and reports its findings to the relevant College Director and DAT college representative. A single, system-wide report for the relevant division, based on the aforementioned AQT:ADP reports, is submitted by the DAT Chair to the Director, Academic Services, who presents an executive summary to Academic Council (Higher Colleges of Technology, 2005).

There are no previous studies illustrating how the PQA works in the UAE higher education. The first objective of this study is to describe in details what is PQA and how it works, as it will be explained later.

The HCT's Program Quality Assurance System is summed up in the Figure 6.4.

6.6 Analysis of Key Criteria with Reference to Abu Dhabi Men's College (ADMC)

As indicated earlier, each college, for each program that it offers, is individually responsible for demonstrating how the following Key Criteria are satisfied:

KC1 Industry and community satisfaction with the program.

KC4 Student performance in assessment and progression through the program.

KC5 Student and graduate satisfaction with teaching, learning and assessment.

KC7 Course delivery and teaching, learning and assessment strategies: ensuring these are aligned with KC3.

A. KC1 – Industry and Community Satisfaction with the PQA

The PQA mechanisms at this key criterion include the following (ADM, 2004):

1.1 ADMC consultation with business and industry via program Advisory Committees. Providing an ongoing exchange of information between business and industry in the College.

With regard to PQA process, the role of and functioning of Program Advisory Committees are outlined. PQA Evidence of the Process, Analysis of the Evidence, and PQA Evidence from the process are also outlined.

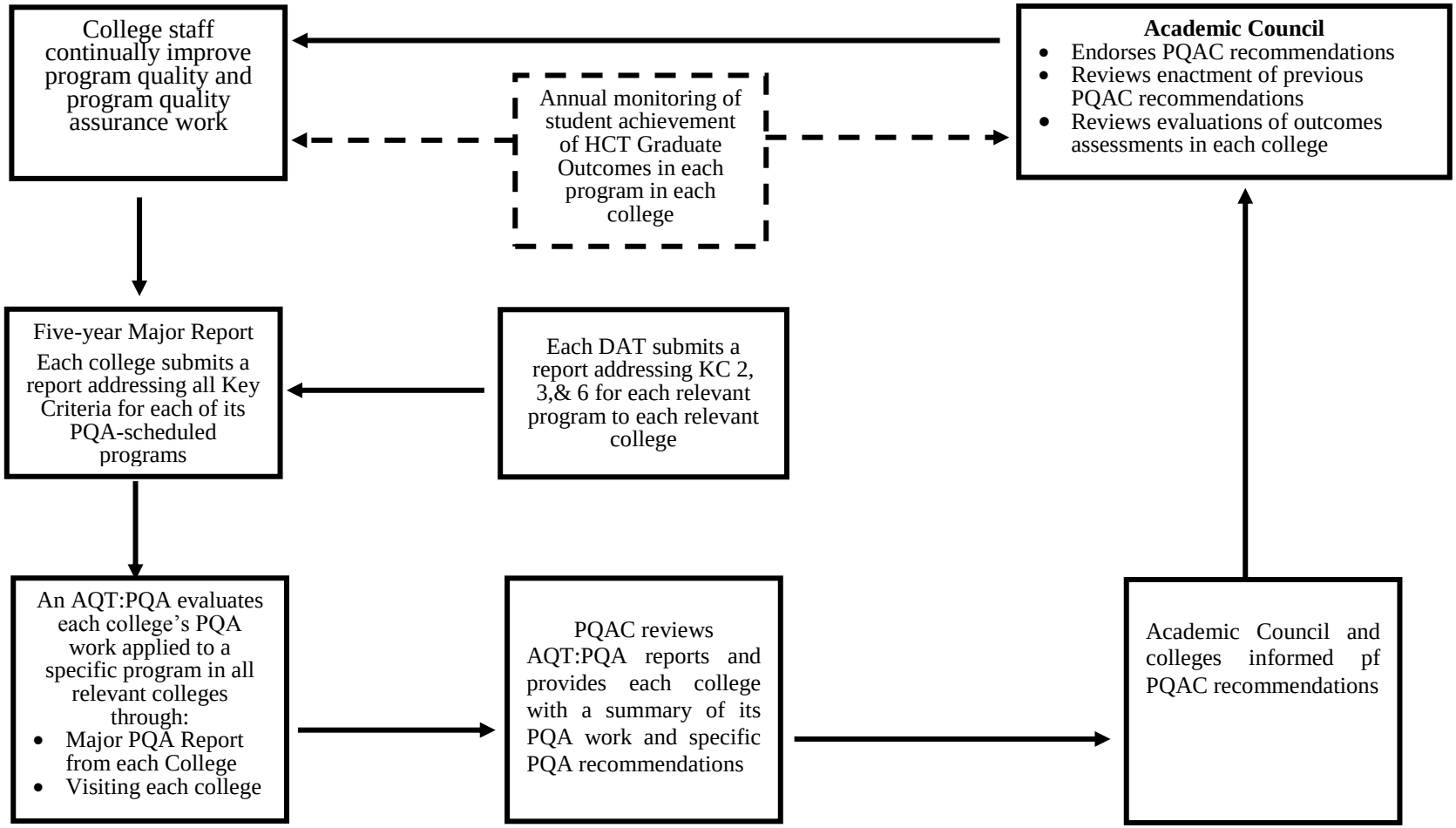
Consulting with the business and industry in this way helps the HCT identify the needs of the labour market and also help HCT offer courses, degrees and specialisations that would help graduate promote their career in the future.

1.2 Evaluation (using the Employer Satisfaction Survey tool) of Employer Satisfaction of program offered by ADMC, including employer experience of ADMC graduates. The PQA Process is described in term of guidelines that the Program Supervisor and Program Team need to implement the procedure(s) most suited to the particular employers they deal with.

Implementing this mechanism would ensure meeting the labour market needs and requirements of the HCT graduates; hence would help graduates finding jobs that suit their qualifications and training.

1.3 Evaluation of faculty views and perceptions of the current English, Mathematics and Basic IT level of students to whom they are currently teaching a technical, business or IT related course.

Figure 6.4. Summary of the HCT's Program Quality Assurance



(Source: Higher Colleges of Technology, 2005)

Key

DAT:	Divisional Academic Team	KQ	Key Questions
AQT:PQA:	Academic Quality Team: Program Quality Assurance	ACS	Academic Services
AQT:ADP:	Academic Quality Team: Assessment Development process	PQAC	Program Quality Assurance Committee
KC:	Key Criteria		

This PQA mechanism does not seem to fit with the provisions of the previous two mechanisms, whereas it links to the fourth mechanism explained later. The KC1 concerns with: Industry and community satisfaction with the program; this means the satisfaction of the external stakeholders, whereas students are part of the internal stakeholders.

1.4 Evaluation of ADMC students using data collected from work-placement providers.

This mechanism links to Mechanism 1.3 but not with Mechanisms 1.1 and 1.2. It mainly deals with evaluating students (internal stakeholders) rather than with businesses and community (external stakeholders).

B.1 KC4 – Student performance in Assessment and Progression through the Program

The PQA mechanisms at this key criterion include the following (ADM, 2004):

4.1 Statistical analysis of student performance and progression in vocational programs at ADM. This key criterion refers to analysing student grades against internal or external benchmarks, and this set of benchmarks is based on an extensive analysis of student grades in HCT system over the past three years at two levels: System vs. College, and College vs. Department. Over the next three years the programme will be monitored against these benchmarks while collecting data. In the case of adopting an external benchmark Phase I is eliminated.

The PQA Process is undertaken across three phases: Phase I – Every 3 years; Phase II – Every Semester, and Phase III – Every Year.

Evidence of the Process comes from: archive and hardcopy of statistical data and minutes of PQA meetings; and student performance data collected database. Analysis of the evidence is undertaken by analysing PQA-KC4 Semester Action Plan, PQA-KC4 Annual Action Plan Review, and PQA-KC4

Benchmarks and Overall Action Plan. Evidence from the process is in the form of reports published in the PQA E-Portfolio.

However, there is no reference to, or stipulation for the mechanism or methods regarding how student performance is established; for example, whether by written examinations, assignments, tutorials, etc. This issue needs further elucidation.

B.2 KC4 – Collate and analyse ADM and ACS statistics on student performance, progression rates, trends, hurdles, etc.

4.2 Collect from SRS through ADMC ACS data on student grades including comparisons with grades at two other comparator colleges and from HCT ACS data on student performance in examinations broken down by colleges and skills.

With respect to the comparator colleges, the mechanism does not provide explicitly which colleges, whether from other UAE universities or other higher education institutions. It also does not stipulate how the HCT can have access to data of these colleges. It also does not explain whether the HCT has coordinated with such colleges on exchanging data in this regard.

B.3 KC4 – Student performance in assessment and progression through the program

4.3 Planning and recording student performance in assessment, including the monitoring of student progress throughout the semester. There is reference to "student section," and "students at risk,", but neither are defined.

C. KC5 – Student and graduate satisfaction with teaching, learning and assessment

The PQA mechanisms at this key criterion include the following (ADMC, 2004):

5.1 Evaluation of ADMC provision by students undertaking a program of study.

5.2 Evaluation of ADMC provision by employed graduates.

5.3 Evaluation of ADMC provision by certificate graduates.

5.4 Student appraisal of faculty.

PQA process, PQA evidence of the process, analysis of the evidence, and PQA evidence from the process for 5.1 to 5.4 are outlined.

D. KC6 – Optimization of resources and resource issues for the program and courses

6.1 Programme resource update audit and evaluation.

6.2 Evaluation of utilization and satisfaction with services provided by the LLC, using data collected from users (students, faculty, and support staff), via an online questionnaire and polled data.

6.3 Evaluation of faculty views and perspectives of the facilities, resources and teaching support available and/or utilized in the delivery of a course, taken with the context of the related program of study in which the course sits.

6.4 Ensuring the alignment of Professional Development allocation and utilization, with HCT, ADMC, Department, Program, Course, and/or Faculty needs.

6.6 Evaluation of semester PQA survey load at ADMC.

PQA process, PQA evidence of the process, analysis of the evidence, and PQA evidence from the process for 6.1 to 6.6 are outlined.

E1. KC7 – Course delivery and teaching, learning and assessment strategies: ensuring these are aligned with the Program (This mechanism also contributes to KC6)

7.1 Evaluation of faculty views and perspectives of a course they deliver within the context of the related program of study in which the course sits.

E.2 KC7 – Course delivery and teaching, leaning and assessment strategies: ensuring these are aligned with KC3.

7.2 Evaluation of Work Experience (including the ADMC Work Placement process) using data collected via Faculty Mentors and Work Experience Coordinators.

7.3 Evaluation of specific Course Outline by Faculty (and/or Course Teams) involved in delivering the course, with a view to offering recommendations to the relevant DAT for improvement.

7.4 Evaluation of Online Courses.

7.5 Evaluation of approved and pending course outlines in order to check alignment of curriculum content with the HCT Graduate Outcomes.

7.6 Alignment of the delivery and assessment of course curriculum content, with program aims and HCT graduate outcomes.

7.7 Compilation of Course Assessment Files and/or Course Binders.

7.8 Peer Review of Course Assessment.

PQA process, PQA evidence of the process, analysis of the evidence, and PQA evidence from the process for 7.1 to 7.8 are outlined.

6.7 The PQA: A Critical Discussion

Nicks-McCaleb (2005, p. 329) states that one significant development that has taken place at the HCT in response to both rapid growth and the need to gauge the success, or otherwise, of college programmes, their graduates, and feedback from employers, is the Program Quality Assurance (PQA). Nicks-McCaleb adds that in this program is

that academic programmes are monitored and reviewed for a whole academic year, every three to five years. The functions of annual review have been reported earlier in this chapter. Accountability, best practices, outcomes and results are examined, and managers are granted the opportunity to defend their written reports before a review panel (Nicks-McCaleb, 2005). Reports and evidence are stored in an on-line portal and authorised staff can access data on a regular basis to update them to maintain their currency. These data make available very important information which may be utilised to address issues relating to the issue of current high level of unemployment in the UAE, and further development of strategies to make sure that programme offerings are corresponding to the needs of the workforce (Nicks-McCaleb, 2005).

To sum up, based on the analysis of the PQA, the HCT approach to quality assurance has several strengths, as well as certain weaknesses. HCT's strengths in this field include the following:

1. The HCT has designated the quality of education as one of its top priorities. It is clear from the analysis that the HCT have publicly identified the goal of improving the quality of teaching and student learning as a high priority. This is obvious through the introduction of the HCT learning Model during the academic year 2002/03, which is "*concerned with ensuring that HCT students produce work that is of the correct standard for the credential level; in other words that the product of the HCT learning process was acceptable and enabled students to meet the HCT mission statement.*" (IED, 2003b, p. 4). This priority granted to the quality of education is vital to the achievement of colleges' commitment and involvement in the complex task of improving teaching and student learning.

2. The establishment of Program Quality Assurance Committee (PQAC) as the HCT committee designed to monitor and stimulate quality assurance activities within academic departments. It is noted that the PQAC functions have increased faculty members' awareness of the strengths and weaknesses of the existing teaching and learning approaches, and improved their knowledge of academic quality assurance processes.

3. Faculties would have made little progress on improving their quality assurance processes in terms of teaching and learning at the subject unit without the external pressure of the labour market and businesses.

4. The stated HCT strategy for quality assurance highlights that academic quality is a key responsibility of each academic department or programme; hence quality assurance processes must be designed by and appropriate to each department or programme.

5. The PQA allows for program teams to receive feedback and access to resources to support improvement and is consistent with expectations of external bodies and builds staff competence concerning program management and evidence based practice (Wahr et al., 2002).

HCT's weaknesses in the HCT's current quality assurance programme include the following:

1. The approach to quality assurance adopted by the HCT and its Colleges may be unnecessarily complex and in some cases encouraging a "culture of compliance" rather than improvements in student learning. Reading through and analysing the various key criteria may be seen as "top-down" approach, with very little, if any, from "down-top." The general framework adopted by HCT and its Colleges concerning quality assurance work may be too prescribed and seems to have led to some confusion among the departments. The researcher believes that some departments are confused by the quality key criteria and did not always understand their relevance.

2. The PQA Processes publications seem to indicate that the PQA process places a premium on the "production of documents," the writing of quality assurance evidence of the process, analysis of this evidence, and PQA evidence from the process, rather than the demonstrable implementation of effective means of assuring academic quality. The researcher believes that this may encourage a "culture of compliance," in which departments produce documents that will meet

a framework specified by HCT, but engage in little valid improvement or commitment to student learning.

3. The HCT strategy for improving education may place much emphasis on teaching but an insufficient emphasis on enhancing student learning. The need to improve means of teaching in higher education is a universal concern, especially in countries where the competitive pressures for research are lessening faculty members' engagement in teaching. Consequently, the HCT's focus on improving teaching and encouraging faculty experimentation with potentially more effective approaches to teaching is definitely appropriate. Nonetheless, teaching is one means to the end of improving student learning, not the end itself. In fact, it is impossible to judge whether changes in instruction or types of instruction are beneficial or even worth the cost of the change unless some effort is made to thoroughly assess their impacts on student learning.

4. The goal of student participation in the improvement of academic quality and education may become dysfunctional if pursued in too strictly. Quality assurance documents and plans place a strong emphasis on student "feedback" as a means of improving teaching. Undoubtedly, student criticisms and suggestions can be a very useful source of information for improving the processes of instruction; but less so on what is to be taught. It is also imperative for students to understand the purposes and processes of academic quality assurance, specifically if they are likely to participate in the processes and provide information.

5. Dependence on availability of evidencing data that may be difficult to source and/or of variable consistency.

PART TWO

ANALYSIS OF INTERVIEWS WITH HCT MANAGERS

6.8 Introduction

This chapter analyses the findings of the qualitative study in the form of semi-structured interviews conducted with some of the HCT management responsible for the implementation of the currently implemented quality assurance programme, the Program Quality Assurance (PQA). The contents of this quality assurance programme has been analysed and discussed in the Part One of this Chapter. Quantitative data collected using a questionnaire based on the Malcolm Baldrige National Quality Award (MBNQA) Framework (staff questionnaire) and a questionnaire based on the SERVQUAL (student questionnaire). An attempt will be also be made to link qualitative study, when and where possible, with the quantitative survey, particularly with the staff questionnaire survey. Data and information will be analysed and discussed across a number of themes.

6.9 Leadership

Interviewees were asked a few questions relating to the role of leadership and how they deal with the yearly reports, and leadership focus on staff and students.

6.9.1 Role of Leadership

Interviewees were asked, in terms of leadership, whether top management assume an active role with regard to the evaluation and improvement of the implemented quality programme. All interviewees commented on such role and agreed, from their own perspectives of and experiences at their colleges where they work, that top management plays such role. For example, one official who have been working for the HCT, maintains that a number of initiatives of the programmes have been developed by the HCT, though producing mixed successes due to the fact that there were not always the same objectives, very often undertaken by certain quality units in

the college that have not always had good communication with the other colleges. He argues that this tended to be a break between what the colleges were doing and what the HCT were doing through the Central Quality Programme Assurance Office. He believes that they have attempted to put in place a way of evaluating students' outcomes so the whole graduate programme has been a quality assurance-driven programme, as well as their attempt to put in place performance indicators for faculty, staff and management across the board in the colleges and throughout the HCT. He adds that they have been trying to be consistent so as to establish consistent standard preferences at the international standards and the most recent quality assurance endeavoured by the HCT, which again had mixed outcomes as they want to go with SACS to find international accreditations for the whole system.

A second official, who had been working for the HCT since 1985 and occupied various leadership posts, believes that the top management assumes such a role regarding the evaluation and improvement of the implemented quality programme. From his personal perspective working with different directors, he thinks that leadership at the highest levels in the college either directors or associate directors and maybe the heads are definitely involved and ultimately responsible for the implementation the quality process within the college. He is quoted saying:

> "*We have the expression, 'the books stop here'. We are responsible for it; if it is not carried out it is the fault of the director or the associate director or whoever leading that initiative in the college. So, yes, I think from a personal experience that the people I worked with and myself we were definitely leaders in that area*."

The third official, a college director, indicated that he is familiar with two systems, the system that he worked with in Australia, which is also implemented at the HCT, and reasonably familiar with the KCs which are assessing here. He maintains that there are no much differences in essence between the two., rather there are lots in common, but in essence one can see that this criterion has nine standards, all looking at strategic management, adding that "*there is client focus, course design and review, delivery, skill recognition which for us is an issue with advanced standing, not as much an issue here, HRM, financials, assets, and organisation performance*." He went on indicating that within each of these there are then key criteria, for instance, if one look at trying delivery, the criteria that are listed include the following: "*has the*

organisation got a curriculum, documented processes for progression, for delivery and for all that sort of stuff; does it cover the national guidelines, other records efficient and well managed and accurate, are admission processes clear?" He adds that everything to do with students has been delivered, and that the same thing also applies to the KCs, because there will be similar criteria for each of those, and then within the college the management would be addressing each one of them in a slightly different way, depending on the requirements of these criteria.

The fourth interviewee, who has been working for eight years with the HCT also indicated that top management assumes active role concerning the evaluation and improvement of the implemented quality programme. He adds that the top management are the first ones responsible and accountable about quality, though quality is not only form management. He is quoted saying that:

> "*It should start from teachers first, and the teachers are the people who made quality, but accountability should come from the senior management and the leaders. If the leaders believe in quality then will make first teachers and people working with them follow the quality process. That is I think very important to the HCT in terms of doing training for staff. Most our leaders here went through an academy in Britain which trained them on how to work on different aspects of leadership, quality is one of the things that come up in that training. So, really have the responsibility of making it happen because they are the ones who should watch everything and make sure they follow up the process. Without quality means our graduates are not useful for the industry; hence, we are not meeting our objectives in the end*."

Another official, who had been working at the HCT for ten years, agreed that the top management definitely assume an active role with regard to the evaluation and improvement of the implemented quality programme. From his experience, he argues that there are several levels of leadership; one was in managing quality assurance system and the leadership was required to improve the system, hence, according to this official, HCT quality assurance system started around 1996. He referred to Patrick Boyle who was the person in charge of the quality assurance system as well as designing it, with whom this official worked. At the time when both managers worked together, the interviewee official used to go to colleges and give workshops on quality assurance system, for example, how it works, and how they actually respond to the criteria, and from those experiences in leading internationally, led to

the development of the quality assurance systems which he started to make some improvements. He states:

> "*So, in one level you are to provide leadership in making the quality assurance good for the HCT. The next level is how people implement it. As I said, you have to go to the colleges, explain things, what is required, give examples of good quality assurance work, and give example of good quality assurance reporting. I remember once the aviation programme at the college did not get a good evaluation, it was not doing a good job against the quality assurance criteria, so I was told that your office in the Academic Services could create another office in the college and had to work for two days a week helping the aviation team to become better in quality assurance work. So, I was providing leadership on how to do quality assurance work. There were two levels; the design and the improvement of the design, and there is the implementation.*"

These responses tie up with responses to questionnaire items, reported in Chapter Seven, and discussed in Chapter eight, in which questionnaire respondents (HCT staff) indicated that the senior leaders have evaluated and improved leadership system, such as, the way of using their review of the HCT's performance, and staff feedback in the evaluation process.

6.9.2 Dealing with Yearly Reports

Managers interviewed were also asked about how the leadership deals with the yearly report, given that there are so many reports from the quality assurance to the management. The first interviewee indicates that leadership has not done much about the earlier quality assurance reports, except in terms of, compiling data over three to four years, maintaining that several quality assurance programmes required leadership to demonstrate continuous improvement; hence, it needed a baseline with which to establish a three year programme for the moment, and in some cases going back for five years. He adds that when top management want to use such baseline against which they can assess improvements in the quality of what they offer their students of services, programmes and qualifications that they emerge from the HCT. Accordingly, the management's interest in the earliest reports was in fact to provide a basis against which they can assess how far are their improvement at present.

In a follow-up question, the interviewee was asked if there is any industrial programme within the HCT colleges or his college and that this programme does not meet the criteria of the quality issues in HCT system or the quality process as a whole, how would they, as the management or leadership in the HCT system, will deal with that certain area? The researcher was asking whether a programme does not meet the HCT requirement.

The official thinks that in the first case the management have to be very clear that all new programmes must be approved by the Academic Review Committee and then signed by the Policy Council. He also thinks that one of the reasons in the past that the programmes did not meet the HCT requirements is that they have not been through that system of accreditation with the Academic Review Committee and then with the Policy Council, and that for more academic programmes it is an excellent idea to have an international partner that provides international accreditations, giving examples of international accreditation body such as Strathclyde University, Dickens University and Marvin University, concluding that international accreditation helps HCT provide the kind of situation the researcher was describing. He adds that there is another class of quality assurance regarding new programmes, maintaining that:

> "*There are two programmes for which the HCT does not have appropriate qualifications. A case in point is the Advanced Diploma which was added in 2007, and the advanced diploma attempts to make the need that industry has the programme which is not academic but which might have two days a week in industry and three days at the College. So, there is a mixed industry and college programme, and may need a new qualification such as advanced Diploma to demonstrate what the industry needs*."

The second interviewee referred to a member of staff who was responsible for providing the management of a plan, which is good but open to the management team to discuss it and change it. He adds that something has happened in quality evaluating at the end of 2006 when he brought from the States a teacher evaluation of management after having been changed a little bit to fit other colleges. However, he adds that the whole package of quality assurance looked at by the faculty including resources, facilities and the most important is the feedback from the customers. He states:

> "*Of course, the students give us feedback about the teachers and of the facilities; the teachers give feedback about the management, and the facilities. And what I have started this year* [2006][2] *is that teachers give us feedback as for their leaders, and supervisors. That thing we have not done it before*.

This official was also asked if the industry asks for a certain programme, and these programmes conflict with HCT quality issues, how would he deals with this, as a leader. He indicated that, as a leader, he will try to convince, as a person who is very convinced that HCT higher diploma is a very good qualification of a very high standard, the industry there that this is what there should be, stating that:

> "*We, as a system, can provide the higher diploma for them that would increase the quality and the skills of the people involved. If they say, no, no, we don't want this from you programme, we want something in too, I am afraid my view is that I am sorry the HCT cannot do it, but CERT can do it. CERT is our business arm, is more than this, nobody says it is our business arm. My personal view is that we should concentrate on diploma and higher diploma and try to convince the outside community of the value of these qualifications and we could make a higher diploma or diploma to suit their needs, not the other way, or we want just some basic skills, I am sorry this is not the HCT, that is CERT not the HCT*."

The third official indicated that the yearly reports at HCT is different from those in Australia, because in Australia he has to report to the college management board, and that report includes a full set of criteria including performance indicators, which the HCT does not have. He adds that it requires full study of the demographics, the access of equity, the services to the community, full financial reporting, since in Australia they are statutory authority, so he managed all of his finance; maintaining that the shortest report exceeded a hundred pages. So, he indicated that there was auditing requirements when the organisation is a statutory authority is quite different from what are in the HCT. In the HCT, a fairly short report is made in terms of quality against designated programmes. He reports that in 2006, it was on IT, and in 2005 on health, when there are visiting assessors who look at the delivery, the exams and all sorts of these things, programme by programme, but there is no overall quality assurance of the colleges as there is in the Australian system. He commented:

> "*We put in reports to tie on our normal things like delivery, students, new initiatives, community outreach and those sorts of things, but the reports do*

[2] The year is added by the researcher, as the interview was in September 2006.

> *not have a steady format, they are not audited by auditors, the only thing audited here are the financials. But all of those things are normally audited and written off by professionals, external auditors in the system who then report to the college boards in our system*."

The fourth official elaborated more concerning how the leaders deal with the yearly report, maintaining that for the HCT they have two things. First one is the need to look at the industry and community satisfaction with the programme, which means the HCT graduates are meeting the industry's satisfaction, which is very important. The other one is the satisfaction of the graduates when the graduates are really feeling they have enough skills and knowledge to work in the industry. Hence, the leadership also needs to test which goes through different questionnaires and different mechanisms to do it for the industry and the students as well. He also adds that the other thing which is important again is the delivery of all courses, adding that: "*When we teach the courses, are we really teaching better quality delivery, in terms of planning the course, mix between practice and theory, bringing new emerging technology in teaching and learning, and stuff like that which is very important for our students*." For the industry, the leadership has different mechanism to do it; stating that it has the PAC meeting for each department at least three times a year. Then the leadership has work placement questionnaire and the visit by the faculty to the university, as well as having needs analysis which the management does some questionnaire and sends them to the industry and ask them to comment on and analyse it and return back their reflections. He went on saying that the other important one is the performance of HCT students in the programme, so the management measures, if someone came to the programme how long he takes to graduate, how many of the students have failed and repeated the course; how many of them dropped the course, and why the question and then what should leadership do about that. He concluded that these things are ongoing things happening, and these four are the college responsibility, but there are other two which are systems responsible like the accreditation of the programmes, the IT development BTEC for some time. He added that business has another one, and content has another one. Hence, these accreditations are system responsibility because they are for all colleges, and the other one is the design of the programme coming with higher diploma, Bachelor degree, which is the system responsibility, and the college cannot do that. He then said that:

> "*This needs to be reviewed by the system, and there is one between the college and the system which is the optimisation of the resources, are we using the resources in the right way, for example, sometimes we share faculty between different departments? Because they are expecting certain fields and another department needs IT at different facilities like our labs and classrooms, and this is shared between college and system because the system needs to come with the optimal hardware and resources for any programme; the colleges make sure they are really implementing, so we have the responsibility, we have to report about the optimisation of the resources and the system needs to report as well. So, we these we keep gathering data, analysing them, and do reflections and then we store them in our database*."

In a follow-up question, the fourth official was asked if there is any industrial programme within the HCT colleges or his college and that this programme does not meet the criteria of the quality issues in HCT system or the quality process as a whole, how would they, as the management or leadership in the HCT system, will deal with that certain area? The researcher was asking whether a programme does not meet the HCT requirement. He indicated that the HCT have requirements for any programme that the management cannot just weighted it or changed it, because of the industry. There is also the process of how to get any programme approved, starting from certain college, arguing that:

> "*this is the industry programme, and that client would come and say I need a programme and then we start designing it. After we design it what we do we take it to DAT. DAT consists of representatives from each college and DAT is responsible for making sure that that programme meets the HCT requirements. If it does not meet the requirements then we say no. Then after we say yes there is another step we have to go, we need to go to the ARC, and ARC has again to check if it meets HCT requirements, and then it goes to the Policy Council.*

Hence, according to this official, it is not up to the college to decide if it meets the HCT requirement or not. If the industry needs special programme, and it does not meet the HCT requirements, and they insist, HCT will not do that programme. He adds that HCT can do it but if HCT does it will not give them the HCT credentials and that is what they get at the end,

> "*they will get a certificate that they have completed training and give them a list of the courses we have done, but they are not going to have HCT qualifications, and there are some industries that need it, for example, some companies want leadership training which is in our programme, or they need work readiness programme, which we are running it now. We do all these but*

they are not HCT credentials, they would not get any higher diploma or other credentials."

In response to how the management deal with the yearly report, the fifth interviewee indicated that in the early days it started of being called Programme Quality Issues which was only by programmes. So, HCT did not have quality systems for finance, recruitment, maintenance or anything like that, it was only programmes. He adds that in early days, each programme had a team and programmes were put on 5 year schedules; hence, in 2000 it might have been financial services, it might have aviation technology, or it might have been Chem Lab, like that, so every year HCT had schedules and management had a big meeting room in Academic Services, called the Issuance Committee, and was enlarged to have an evaluative team, for three days every semester, probably six programme team representatives came in. The committee would have power point presentation, files of evidence and previously would have submitted their reports. He states:

> "*The Committee would have read the report and we would sit there and would listen to them, and we would hear about their quality assurance work and we would give them feedback and would give them back a grade rating because we had grading systems, something like meeting requirements minimally, meeting the requirements very well, meeting further improvement, just not meeting the requirements and this was the system we have on a semester basis. We do not this anymore*."

In a follow-up question, the researcher asked this official the following: "*If the industry asks for a certain programme, and these programmes conflict with HCT quality issues, how would you deal with this as a leader?*" This official indicated that this is a problem, and happens quite regularly, and one way to look at it is in the quality assurance key criteria (Key Criterion No. 1 is Industry and Community Satisfaction with the Programme). Hence, the colleges offer the programme based on monitoring whether the community is satisfied with the programme and if the colleges get the feedback from the community or the industry indicating that they do not like that programme, it does not give the industry and the community what they want, then the college and the system is asked to do something about it. He commented that sometimes one has to do something about it to keep the customers happy, but the biggest problem is when what they want lowers HCT's standards. He adds that at some time "*the HCT has to say 'no' we cannot do it*." For instance, I was involved

last year in a team where we have some industries would say that students want to have diploma and we want them to get them in one year, for example, but we know that our diploma programmes are more than one year, so we cannot do it, so there is a tension between what the industry wants and what the HCT wants. Hence, you have to find ways on how to do them.

6.9.3 Leadership Focus on Staff and Students

Interviewees were asked whether leadership focuses on staff and students, student learning and on improving through the HCT.

The first interviewee thinks that this is at the heart of the HCT commitment to quality assurance to continually improve the programme and the support systems for students learning. He argues that student learning is where quality assurance should focus because that is the most important thing; "*it is the only thing that we do*." He thinks the quality assurance in this respect has been improved enormously, and the HCT assessment processes have improved. He also indicated that the mix of the balance of summative and formative[3] assessment has improved; the programmes have become more integrated; they have become problem-focused and they are at present involve industry much more directly across whole of students' experience, and certainly at Dubai College, as he puts it. He comments that:

> "*Students are encouraged to work with the industry on the projects from their first, second, third and final years, so I think that the quality assurance is built into ensuring that students are meeting graduate outcomes of the HCT, because this was very important decision to implement at the graduate outcomes and to put in place the assessment all along the way that makes us confident that we have reached these graduate outcomes*."

The second official maintains the HCT leadership quite rightly focus more on students though some people do not agree with that, but at the HCT, it is students first, second and third, and of course leadership look at the faculty. The faculty work very, very hard but he thinks that they are well rewarded, arguing that:

[3] *Formative evaluation aims to provide systematic feedback to the designers and implementers while summative evaluation is concerned with identifying and assessing the worth of programme outcomes in the light of initially specified success criteria after the implementation of the change programme is completed*" (Cronholm and Goldkuhl, 2003, p. 65).

> "*our package especially if you have a family with housing and education is excellent. We are here we do not have infinite resources; we are here to help our students succeed both inside and outside the classroom. That is why at the Women's College we got a new student lounge, we have a faculty lounge. We did not have student lounge, I don't know why, now we have nice ambience, nice corridors, nice coffee shop. We were not paying enough attention to the needs of the students. My efforts are personally, 80% on students, 20% on teachers*."

The third official indicated that looking at the KCs in essence, if looking at the seven KCs, he thinks for a certain extent that leadership are focused largely on KC3. He adds that they are looking a bit at the external benchmarking, but this is falling away to a certain extent. He went on indicating the when I came to the HCT, the system tended to be strongly aligned to BTech, which is an Edexcel, but this is no longer the case. He states that:

> "*Businesses are aligned with SABSP, a health is sort of moved on. Engineering, as you know, is advert, but it is not as strong as it used to be. Because, we now ask the question whether or not we should be benchmarking or being accredited institutionally or by programme. So, the debate on these is satisfactorily argued. I, at this stage, still argued for programme by programme accreditation. I think it is important*."

When the interviewer asked if this has passed out? This official thinks not, as it goes hand in hand with the other. In terms of institutional accreditation he thinks that the HCT still has work to do in a number of areas.

The interviewer asked a further follow-up question, concerning whether there is a conflict between the quality system HCT are running and there is a new programme being asked from industry to be like totally based-HCT, how this will be managed, from his knowledge and experience. He responded by saying that normally, what happens is that HCT gives the industry a query, then what HCT does is lecturers to visit the industry, or vice versa, that sort of request is referred to the college Pack, the Industry Pact. He said that they representatively are supposed either to confirm the name or the direction or whatever to give the industry a view, and what is missing here is any related research from the UAE national manpower plan. That link is not at the HCT, he commented. In his view, there really should be a research department in the HCT that looks at changing in the emerging trends. He recommended that this department should really be preparing planning and should be doing research with the

Centre of Strategic Studies at the Ministry of Economy, and should be able to identify that this is the direction of the economy. He commented; "*we have a growing area in IT, a growing area In engineering, or in hospitality, or tourism, and likewise, they should be able to confirm there is something coming from the industry, this is correlated by what is coming from the national analysis, but this is a different environment, because I imagine that tourism in Dubai is different to tourism in Al-Ain*." Hence, he indicated that there will be variations but overall one should be able to correlate from somewhere the demand or growth in employment, or job opportunities or as he puts it "*change in technology*." Once that is done, HCT goes ahead and design a course, having two options. "*You either design or you buy. So, either design a HCT course or look at the University of London, or Manchester, or if this is available at Strathclyde, whatever. So, it might be more advantageous to run a course from another constitution. Once you get the course alive you have to act, approve it and the next step is to go and fund it*." He adds that this is an issue because some programmes like business require less money than engineering where major plant and equipment are needed. This is the next step, to have these courses funded, and then colleges have teachers, and so forth. He concluded saying: "*So, that is the cycle, for me, what is missing is any sort of clear relationship with the national imperatives, or even some Emirates research that says we need this at Al-Ain, because in Al-Ain we have special industry*.

The fourth official indicated that the focus is to make sure that the students really learn and the teachers are taking this commitment to meet students' preparation. He thinks they are doing that, maintaining that this depends on being different from one college to another little bit, not exactly depending on the resources and other things.

The fifth official indicated that the whole design of the quality assurance system is to give managers tools to do that, so, for example, the HCT has arranged then to be visited by some quality assurance teams and that HCT has to demonstrate that his college is consistent with the quality assurance criteria, and in those criteria the things like student satisfaction would take relevance. He concluded saying that:

> "*We have to ask the students: are they are happy with what we do, then we have to look at the results and if we find something that we can improve we have to do it; the system is designed to do that*."

6.9.4 Annual Performance Review

The official interviewees were asked whether the HCT is undertaking performance review every year, and whether the management and leadership are utilising the findings of these reviews, as well as to extent the participation of management in utilising these findings. The first official indicated that the performance reviews at the HCT start with staff and faculty as they have professional performance reviews conducted by the supervisors, and supervisors are running a course for management and senior management, and the process of reviewing goes on from the director and down to every staff member. He also indicated that the performance review system has been changed at his college during the last few years to include systematic performance reviews which start with the college agenda of every year; "*the college produces an agenda each year of five or six priorities or goals for the year*." He adds: "*We align our performance review of faculty and staff with these goals and as we go through the year, in the mid year and end of year, to ensure that these goals are reached*." He concluded that the technology to enable this to happen and the online forms and systems of recording data have made available throughout the HCT which is an enormous step forward. He adds: "*Because now we can complete performance reviews with comparative data which go 2 to 3 years, as long as we can find the data and put it in the system*."

The second official indicated that it is minimal, not big at all. He maintains that he has been asked by two committee meetings to look at the directory, to look at what else was produced. He states:

> "*If the feedback comes back we are not doing well in this area then as the associate director I can see right; for next year we will aim for that; so, I supported it totally, but I am not involved in it until the feedback comes back and then we have to implement change*."

The third official announced that he does not know there is any systematic performance reviews of colleges or managers, maintaining that the reviews that occur generally occur at departmental level, because results are looked at, then departments

monitor and review their graduate analysis or those sorts of research which are examinable, so he would imagine that the same sort of reviews in terms of courses, in terms of changes in directions, in terms of lack of articulation, in terms of whether or not there is enough medical contents or science or business, that sort of review is ongoing. He is quoted saying that:

> "*I would imagine it is part of data process. We, individual colleges, come and see there is a weakness in this course; we need to rewrite the subject, so that sort of studies is ongoing. In terms of college reviews, these are left to individual directors. And, I have been in the past done that because otherwise have five or six page strategic plan and at the end of every year we have to look at what we have done, where we are, whether we have not done it we ticked it off and we set that in terms of the SWOT analysis, and then we set the chart for next year, so, we have done these for five years now in the college with reviewing that progress and set our directions*."[4]

The fourth official wanted to speak about one college, the Abu Dhabi Men's College (ADMC). He thinks that the management are participating in quality assurance reviews as well as staff members, and students, because the mechanism they have includes all of them. If anyone of them gives feedback the management does something, and the management have deadlines to make sure that staff members concerned have all the data within the right time, and make sure that they have accurate data and have done the right analysis. He adds that they are participating effectively in that but sometimes the problem becomes of more of reporting. There is a report to do at the end, he claimed and when they get to that situation it is not good. He concludes that: "*This means the objective is to improve the quality and maintain the quality at least by few thinking of just having a report and you need to give the report at the deadline. That is sometimes not a good situation*."

The fifth official indicated that they have performance review of individual people, so the managers arrange this all the time. He adds that they have what is called performance enhancement process, so there is a lot of work with people. In his college, the quality assurance work at the organisational level always seemed to be pushed at the back, because they have to run the college everyday, they have to look after students, after teachers, and "*it is always easy like to do the quality assurance stuff tomorrow*", as he put it. He maintains that:

[4] SWOT = Acronym standing for Strengths, Weaknesses, Opportunities and Threats.

> "*What I mean by quality assurance stuff, we all do quality assurance work with the biggest hurdle is that the administration of it, recording it, the documentation, so I think from my experience in the HCT all college struggle with giving much emphasis to quality assurance applied to the organisation as they do to students and teachers, so we do al lot of work but performance review of people but we do not do much work of the performance review of the organisation.*

In a follow-up question, he was asked if he thinks that quality issues should be run centrally or the Central Services should cooperate with other parties like colleges. He was also asked about the better way to give an effective system. From his experience, he thinks that there should be more centralisation of quality assurance, so, for instance, he knows of people talking of this now but thinks to drive the quality assurance system now they need the HCT to agree to six key performance indicators. Hence, for instance, 90% of all the graduates should get a job when they graduate and that should not. He adds the every college should work hard to make sure that the 90% of graduates get a job. The monitoring of that could be done centrally, could provide the tools and the evidence. He indicated that they do the work how graduates get the job and then they can do the monitoring. He concluded:

> "*So, you know like every semester we could get a report from the Central Services which says, 'here is the league table of the colleges of the HCT; Fujairah, 70% of graduates have a job; ADMC, 75%; so, we all see how we all do. We all go to the same target*.

6.9.5 Delegation of Decision-Making

Managers were asked whether or not the management and leadership delegate decision-making to the lowest practical level. The first official maintains that all colleges try to delegate decision-making because they believe that leaders, everybody in the college is a leader, that the college is not led by one person, two or three senior management, it is a collegial environment in which people work together. He adds that the most interesting aspect of decision making is that decisions are taken within small groups of people, who work together as a task force on various projects, and make recommendations to the management group which meets regularly.

The second official also thinks that the management and leadership delegate decision-making. He attributed his view to that many managers, including himself, are not that

good at delegating, thinking that they can do it better ourselves, but managers know in their hearts that they cannot. He concluded sating that "*we have a good management team, I delegate as much as I can. I am confident that they will do a very good job*."

The third official indicated the delegating decision-making is top and bottom and sidewise process. He gave some examples of top-down decision making, for example, from the very top, Singapore years ago made the decision that there will be very, very high IT-based state and technology-based state. He referred to this as top-down decision-making. Australia was another example, when the Commonwealth government decided to have literacy programmes for migrants to raise the literacy of migrants. So, this is top-down decision-making. He then indicated that the second level, that what comes from the lecturers who look at courses and programmes and look at systems and point to something missing, particularly the experts, the people in the industry who have some ideas. He adds:

> "*then you have the industry through the base who say your graduates, let me say, typical of the moment simple things coming out of the colleges base is basic to me, we need your graduates, your HD and degree graduates are brilliant, but no Arabic keyboard experience. So that the highest level of skills cannot use Arabic keyboards. So, it can be as simple as that or somebody from your own industry, or somebody from business, for instance, we have somebody from the business pack that said none of our finance and business graduates understood Arabic commercial law. So, they are saying you are teaching international practices and international law systems, but nobody knows or knows much about Arabic business practices. So, they say you need to focus a little bit*."

According to this official, this comes from the side lines, and also what comes from the industry and from the other side from the local community, they need this programme for the community. So, decision-making is from the top, from the bottom, it is from industry and from community, and from college staff. He concluded saying: "*It's the ability to collate it all but then make the right decision*."

However, the fourth official did not think that the management and leadership delegate decision-making to the lowest practical level, maintaining that decision-making is in the right direction; the management and leadership are there but sometimes the work is delegated to others, and that is acceptable, according to this official. He adds:

> "*In this college, what we have we have first level of executives meetings which include all the deans and directors of the college, and these people think more of strategy and policy of the college and make sure that this is communicated to the next level supervisors. The supervisors make sure that they are implementing this policy and strategy. Then it comes to the teachers or sometimes the coordinators who will do that, and everybody is doing his part but the decision making is in the right level*."

He also indicated that there is flexibility sometimes which they use, for example, when they give the teacher the flexibility to design his course he wants to design, or design assessment of what he designs. That flexibility is useful, but it has to be within the parameters and quality measures which the college has. "*We cannot accept the coordinates only on on-line assessment. That is not the right way to assess our students. So, it has to be within the criteria*."

The fifth official indicated that some things one has to make decision about, maintaining that "*it is easy to say that all decisions should be participatory, everybody should engage, but imagine you are working in Dubai Units, you have 200 employees; how long would it take for every decision, for every issue to be resolved by the involvement of everybody?* He said that this is just impractical, one gets to do judgements of which things he should seek input on from which people. He gave an extreme example, if a teacher is not doing a very good job, the management is not going to ask everybody in the building should that person be fired or not. He contends that this has got nothing to do with everybody to do with the managers.

6.9.6 Leadership as Facilitators of Continuous Improvement

Managers were asked whether the supervisors, section heads and quality assurance managers play active roles as facilitators of continuous improvement. The first managers thinks they do, though he believes that one of their weak links in quality assurance is that they tend to be very strong on activities and recording activities but then they move on to new activities. He adds:

> "*Where we need to improve is to stop and reflect and to evaluate the programme assurance to make recommendations and make sure that these recommendations are carried through. This is something that we do, we think this through, so we have employed forums, we have programme advisory committees, we have a number of groups of employers who come together to*

> *give us feedbacks. So, we need even to be more systematic about the way we use these feedbacks, so that we can demonstrate that it is going into the quality assurance*."

The second official agrees that leadership play an important role as facilitators of continuous improvements, and this is particularly obvious in quality assurance person. However, he said that they are reactive, rather than proactive, adding that "*we do not look in, we are told by the quality assurance person to do this and we do it. The good thing is we singed up once he asks us for the things we got them. They are already there as a part of our job.*"

Third official thinks that it needs the strong central core to be able to advice the colleges, otherwise, everybody does his own theme. A case in point typically is KC1. Industry and community service satisfaction with the programme, everybody does his own surveys. He concluded saying that:

> "*We all do our surveys differently. In Sharjah you have the Sharjah core unit with their own quality process. The one in AD follows the Sharjah one, but the others are all over the places. So I think there is time to bring this together a little bit; but certainly you need a strong central quality unit to advise. And then to have a similar and consistent template so we report the same way*."

The fourth official also agrees with the question, but indicated that in 2005 they did not do enough for more quality assurance, as departments then needed a supervisor to collect the data and align them and do some reflections and gives his feedback to the college coordinator who is responsible for the coordination and in Central Services it is to do the direction clear.

The fifth official indicated that he is responsible for leading the quality assurance in his college, and has facilitated all the time. He adds that other managers do not get involved because as soon as one says that somebody is responsible for the quality assurance, it is the tendency of everybody else to go that is somebody maintaining that it is not their job, stating the following: "*You get to create a climate so all managers believe that they are all responsible for quality assurance not one person*."

6.9.7 Leadership's Concern with Implementation of Quality System

The following question was addressed to only two managers, the second official and the third official: "Have you, I mean the HCT managers been concerned with the implementation of quality systems, measured or attempted to measure stakeholders' satisfaction with the currently implemented quality programme?" They were reminded that this is a rather important issue since customer and employee satisfaction is one of the critical factors in the success of the currently implemented programme.

The second official agreed with the question, maintaining that he has a good thing about quality assurance. He indicated that they did not have quality assurance in the past, maintaining that they thought they had it but in a different way. He states: "*Now we have all these measurements I think a few of those, including me, were a bit afraid of what we will find out, but usually we it has finished we found out that were doing OK but we could do better*."

The third official thinks that it is student focused, because he thinks most of the things they do are student focused. He also indicated that what happens that they start being driven by performance indicators is the people tend not to look at just teaching and examinations but tend to lose focus on what they are there for. He is quoted saying:

> "*We are trying to work towards the reporting system for the process or the standard without necessarily doing the very best for the students because when you start experimenting it is not always giving you the top results. You are trying with the students. I mean, integrating delivery with the case in point, when two years ago we integrated delivery. But nobody did a research to show that the integrated delivery is in fact producing better results than the traditional separation we have before*."

6.10 Strategic Planning

In terms of strategic planning, managers were asked whether they have short- and long term plans which take into account the analysis of internal factors (operational data, faculty and staff abilities and needs), and external factors (changing demographics), requirements (educational instructions) and opportunities (changing student career interests).

The first official indicated that they do mid-term planning, for 3 to 5 years, which he presumes is a pretty long-term in an educational institution, and this planning is reflected in the first goal of the college agenda, and what that means is that they need to ensure that the graduates of the colleges continue to have the skills and knowledge and understanding which will enable them to be in the forefront of professional and technical development skills in the market. Hence, he contends that they have that longer term planning but also have shorter term planning that is undertaken through the college calendar, where they have events every year, international conferences, international trips for students, have career fairs and a whole range of activities which the college plans day to day, week to week and month to month. He also stated that the college has been trying to do in the last three years is to make sure that every one of those events has an evaluation period built into it, so that the college formally consults its stakeholders about the significance of the event and how it can improve it the following year.

The second official indicated that they have such short- and long term planning. He asks for such planning in his department only for one year; that is, asking for an action plan year for year. He adds: "*I have been involved with the colleges. Certain colleges have 3 year action plan. But here we do not have one, but for my team we have our action plan for a year*."

The third official maintains that the HCT has at a period of time cyclic plans, and the great team effort was the last one to produce one and five year plan. At the ADMC, he has every year a strategic plan and in reference to the last plan he has handed down at the day when the interview was undertaken [12.09.2006] the questionnaire and the requirements for all the supervisors to come to him at the end of the month with their objectives.

The fourth official maintains that what they used to do in his college is to have management retreat and last time they had it was in 2004 and one before in 2000. The purpose and strategy of the management retreat was for 3 years. When it comes every year they have to come with an action plan for that year. This official indicated that the Policy Council sometimes comes with some questions they need to give answer for it and sometimes he pointed direction that they need to explore. The strategic plan

will be for three years, this goes to the dean, and the dean will combine all this together for the division, and give it to the director and the director will come with the college action plan. He concludes: "*So we have three years and one year. By the end of 3 years the faculty, the supervisor or the programme chair needs to check the performance of his faculty against the programme's goals and objectives*."

The fifth official indicated that they have 3-year plan at the moment, and that is all what they got; they have three year strategic plan, and consistent with what he said before:

> "*we have six key performance indicators; the first one is all students graduate on time, next one is all students seeking a job will get at least one interview, all students graduate within an e-part folio, and the college results in system wide assessments would be no less than 70%. So, we created very specific targets to work for. This is typically the tip of the iceberg of our strategic plan, then we have all activities and processes to keep watching, how we are going towards those targets; we use targets and we have processes to get there*."

6.11 Collection and Analysis of Staff and Student Information

With regard to the staff and students, managers were asked if they collect and analyse staff and student information from different sources to determine current and future staff and student needs.

The first official indicated that they do, what he called it 360 degrees review where every staff and faculty member of the college is reviewed every year. He added that this is a tool by which management and senior management evaluate staff. They also have student evaluation of staff that is undertaken every semester, so students have the chance to talk about the teachers and how the teachers are teaching them and how they are supporting the student learning. This is another very important tool, according to this official. He also said that they evaluate exit interviews so that people who leave the college are asked why they left the college and what their experience has been, and this is another tool for evaluation.

The second official said that they do collect and analyse staff and student information from different sources to determine current and future staff and student needs, and as

a manager when he gets this, whether the feedback is of students on their teachers, or teachers on their management, or the satisfaction with the college facilities, he get all that information together and look at it in total and when they get the feedback they act on it in an important way.

The third official also agreed with the question; they do surveys for students but most of the students surveyed were in the final year or towards the end. He also indicated that he does not know that they survey that many students in progress. He concludes: "*I think you find that most of the surveys we conducted just before, just after their experience and towards the end of their studies. I do not we survey than many half was through in terms of their studies*."

In a follow-up question about what the outcomes of such analysis are, he answered "*graduate satisfaction of students*." He added that student satisfaction and graduate satisfaction is an international benchmark, first of all, not in terms of teaching, but in terms of the support, the counselling, the student activities, the student life, and all of those sorts of things, which he think they are absolutely essential. He is quoted saying: "*I think it is also essential to survey students after they have been in the industry for a little while to see whether or not their education has helped them, whether assisting them, not only so much to criticise or say 'yes' or 'no', but to identify gaps*."

The fourth official indicated that they do a number of questionnaires or mechanisms, one is for peer satisfaction with IT infrastructure and technology and equipment and the classroom which is very long questionnaire. Another questionnaire concerns student satisfaction with the programme they are studying; and if it is equipped with other equipments or with the teachers. A third is about students' evaluation of their teachers, and all of this is put in one of our mechanisms. He adds: "*During the last two years we came up with different way instead of doing questionnaires, and started to do focus groups, for example, we take a group of students from different sections and put them in one room to gather more information on discussion*."

The fifth official also agreed, in terms of students' evaluations of teachers, and students' evaluation of college life. He also indicated that they ask staff about what

professional development week they would like, and for each of the managers they have an anonymous evaluation for all staff of the managers, so they ask staff what they do think of managers.

6.12 Mechanisms for Maintaining Effective Student and Staff Relationships

Managers were asked if they use mechanisms for maintaining effective internal stakeholder relationships. The first managers indicated that they have students' representatives from every area to form students' representatives groups and these groups work very closely with staff about a whole lot of issues that to do with student welfare, for example, the kind of food available in the cafeteria, the kinds of services available throughout the centre as well as looking at loaning issues. He also indicated that they have for the first time in 2006 a student parliament, an elected student body who form representative groups across the whole student body, about 2,200 students. the student parliament takes up issues of working with faculty and staff to support students learning.

The second official maintains that they do not have strategy about it, and a great deal of it is *ad hoc*, only when they are asked for it.

The third official said that he does not know what happens. All staff when they do end of year performance of their work they should have at least two evaluations from the students. He adds: "*And this is either 'yes' or 'no', there is about 13 or 14 criteria there on feedback on what he cleared or she cleared, is he understood, this sort of things*."

The fourth official said that the mechanisms are the questionnaire he spoke about earlier and the focus groups and these things which they do each year together, hence, this is one way of doing that, according to him. He maintains that always with the technology they have a very advanced system, but still there is some dissatisfaction from the students.

The fifth official said they do, for example, they have course master club and lots of students are involved in that, many students are making public speeches. He explained course masters as follows when he asked what does it mean:

> "*After college they go to the library and students practise public speaking and the teachers are also there as well, like the teachers and students went to Jordan last year for the Middle East course master club competition. Then, we have different clubs and activities. The director takes them flying because he has a pilot licence, and the students want to go for a little flight. We have social activities in a broader sense; we have open day, field trips, and excursions*."

6.13 Focus Groups

Then managers were asked if they implement a system to generate and analyse measures of staff satisfaction and dissatisfaction. The first indicated that the mechanisms they have for measuring student satisfaction are really about the satisfaction with teaching process through their evaluation of staff. He also indicated that they run focus groups and these groups examine questions like how they are using the technology, how they are using the software, what sort of learning does technology support make possible for them. So, they run most kinds of focus groups to try finding certain aspects how students learning has developed. He added that they could do more in continuing to ask students about their opinion about the programmes, but by and large, he thinks that the students are very satisfied with their programmes. Their employment rates are continuing to rise. He commented: "*Last year we have 65% of our graduates employed, and in some areas we are close to 100%, areas in all sciences, and now in education we are close to 100% employment. So, I think keeping the measure on our graduate employment which is the second agenda goal for the year is a mechanism for ensuring that the students are satisfied with what they learned and what they have learnt is suitable for the job*."

The second official indicated that they look at this issue carefully so they got the system in place. After that, it is decided exactly how they are going to improve things, as a team.

The fourth official indicated that the things they do the questionnaire, is to analyse it and put it in different categories to look at, but there are different ways they use this technology in that area. He added: "*Currently, we are using only questionnaires, and use focus groups and this in electronic format that will go online without supervisors being there or without anybody sitting there*." Then he was also asked if this information takes into account as improvement purposes for the HCT, he answered positively, maintaining that they always do many quality assurances not one and they are trying to find gaps.

The fifth official agreed referring to the examples he provided earlier concerning students' evaluations of teachers, and teachers' evaluations of the managers. He said: "*We have small things, we have suggestion box, we often get feedback there from staff*."

6.14 Student Focus

Managers were asked if they translate findings relating to data and information into usable information for improvement purposes throughout the HCT. The second official said that they do. The third official indicated that they translate findings into usable information for improvement purposes, such as improving services with catering, sports facilities, and parking.

6.15 Learning Outcomes

6.15.1 Performance of Formative and Summative Assessment

Managers were asked if they perform regular formative and summative assessment of all educational programmes and offerings. The first managers indicated that they evaluate programmes constantly at the department level so the divisional academic teams are constantly looking for improvements to programmes, to courses within the programmes, and they are the principal vehicles for academic change, then they recommend academic change within the programmes to Academic Review Committee, which then goes to the Policy Council. So, the Committee relies on their participation in the HCT process through the departments.

The second official indicated that they do that through the teams, and also through DATS and that they are the representatives on DATS and each year they would put a programme and the feedback saying this is not going well. He added: "Of course, we should have PAC programme advisory committee and we do not have them yet at this college. We shall have PAC here; this is a very important part of the system."

The third official disagreed indicating that it is fairly patchy, generally in foundations and most of the departments do a graduate analysis at the end of the year, adding that: "*so, if it is regularly, if it is yes then it is done once or twice per years*."

The fourth official only said that they do that, without commenting any further, whereas the fifth simply said "*Not really*."

6.15.2 Objectives and Targets for Key Education Support Processes

Managers were asked if they have clear objectives and targets for key education support processes linked to overall HCT goals and objectives. The first official indicated that they do, maintaining that they have, for example, clear goals for the development of laptop services and support across the college for all students. Also, they have clear goals for updating and upgrading software programmes for the students so that they will have the most recent programmes. He added: "*We have agreed learning objectives which are specified in the curriculum documents in the learning cycle in project cover sheets, and these are all parts of the quality assurance mechanisms to try and check the students' understanding what have been asked in the learning process and actually to deliver the results*."

The second official disagreed, maintaining that they have not been involved in that and he does not believe that this exists in his college.

The third managers said that they have HCT targets, and he has also done a correlation between HCT targets and college targets. "So, we do have them, but they are not often updated," he added.

The fourth official agreed, maintaining that the HCT has something called 'learning outcomes'. This programme is sometimes for graduates and students in their second year.

The fifth official also agreed, and that they have created their own mission statements that help them achieve the HCT mission. He added: "*Then from our mission statements where we derive strategic plan; that is how we do our strategic plans. So, what we are trying to do is we are trying to say in the Al-Fijairah context, what we can do to help HCT achieves it mission. So, our strategic plan and all of the work feeds into the HCT mission*."

6.16 Organisational Culture

6.16.1 Culture as a Promoter of Proper Implementation of Quality Programmes

Managers were asked if they think that the HCT organisational culture promotes proper implementation of quality programmes. The first official indicated that he thinks that the HCT culture has tended to be at cost purposes because of changes in personnel year after year, so it is not always clear that there has been historically consistent approach to quality assurance. He adds the he thinks where quality assurance is strongest is where it is tied to the international accreditation and that is strongest for individual programmes, maintaining that: "*quality assurance, through SACS or equivalent to SACS, can be found for the whole of HCT that will help to draw more consistent approach to quality assurance throughout the system*."

The second official maintains that they could improve in many areas, and that it takes them a long time from an idea given to them or their idea to get into the students in the class in that programme. He adds: "*It used to be something like 13-point plan, that we have to tick off and if we do not get all the 13, then we did not stop. It used to take a year and a half. No, this is far too long. So, we do have a process*." He also claims that if he wants to start a higher diploma in agriculture, he has to go through the Central Unit before they would say do I need this. He commented: "*I don't mind the quality control, but it seems to take a long time*."

The third official said that the intent is there, but to implement a proper and extensive college programme unit is to resource it, and claims he does not know they are properly resourced. He contends that one person standing in the college alone sometimes with some administrative support is not enough and the Central Unit is not strong enough. However, he indicated that this is not a criticism for the HCT, as the HCT is growing so fast, and every year in each college they are turning hundreds of students. He concluded that the first priority is to teachers and teaching, and to students. He added that the quality systems are normally progressed to a greater degree. He is quoted saying: "*We have some stability. But, you cannot criticise the HCT because it is growing so fast. So, when you are the whole time trying to catch up with the moment, and you have certain priorities, it is fairly a young system. So, I think more can be done*."

The fourth official thinks that culture promotes proper implementation of quality programmes, and the culture in the university is about quality, and when people talk about HCT they are talking about quality. He also indicated that the culture is about quality and focus on quality, but nothing is perfect, still they need to improve in making sure that quality is not the responsibility of just one or two people in the college or the department, it is the responsibility of everybody, and that needs to be communicated to all people involved.

The fifth official also agreed that culture definitely promotes proper implementation of quality programmes, maintaining that it is hard work and sometimes it seems under-resourced, however, the HCT definitely promotes it. He added that they had many visits from different accrediting bodies, at least four from America that he had been involved in them, and visitors have said that the HCT quality assurance system is very good; adding that: "*they always take our resources back to share back with their institutions in the States. I think we have got a good reputation of the QA system*."

6.16.2 Culture Encourages Staff Involvement in Implementing Current Quality Programme

Managers were also asked if the HCT culture encourages involvement of all internal stakeholders in implementing current quality programme. The first official thinks it is getting there. He also thinks that there is at present much greater awareness amongst staff of the need for quality assurance and that within the system the change that is taking place is away from thinking of quality assurance as a task that one have at the end and more towards thinking of quality assurance as an integral part of the design of learning activities. He concluded: "*So, throughout the colleges we've been building quality assurance without expecting people to do something additional at the end of the learning project process*."

In contrast, the second official disagreed that the HCT culture encourages involvement of all internal stakeholders in implementing current quality, maintaining that to do that they need one very important thing that they do not have, enough time. He complained that all HCT teachers work twenty hours, they prepare lessons, forty hours doing this full time jobs with their students, hence, they do not have time after that to think about quality improvement of what they do. He commented: "*Ideally, our teachers should be on 14 or 15 hours a week and the other hours could be spent on how to improve the things we do. We are not resourced for hat time off*."

The third official thinks that the HCT culture encourages involvement of all internal stakeholders in implementing current quality programme. He argues that the concept is there and the responsibility is on all, and most people who come from overseas have been all part of some sort of quality process, so they understand the needs.

The fourth official also agrees with the statement, as they have an open door policy, which means that students can come at any time and speak to the director or the dean, or the supervisor. He added that the faculty always has some ideas to improve certain things or trying to solve problems that they have, and the industry is always within the reach of the HCT in form of presentations and meetings and this encourages everybody to put his views and how to improve things.

The fifth official, like the second official, also disagrees, referring to an earlier question saying that it is like asking people get involved in decision making. He said that there are some decisions that they do not seek wider involvement, and he thinks it is role of the Academic Services to design the best quality assurance system, and this is what have been done. He added: "*we do not go to colleges and ask all staff what do you think is a good quality assurance system for the HCT, I think this is its responsibility, it has to design what it believes best for the HCT. Then we move to get feed back from colleges about how to improve it, what does not work, I think that is the right thing*."

6.16.3 Culture Helps Provide Information and Opportunity for Staff to Become more Familiar with Organisational Change

Managers were asked if they think that the HCT organisational culture helps in providing adequate information and opportunity for staff to become more familiar with the organisational change process. The first official agrees, thinking that the development of the culture is the significant means of disseminating that kind of information to colleges and individual staff because in the past it has not always been easy to extract information that they need for continuous quality improvement.

Second official, however, disagrees, attributing this again to the timetable and number of students and the time, claiming that they used to be better when we were smaller and had course teams that met once a month, and, for example, somebody from Sharjah goes to Dubai and meet together and talk about problems. He maintains that such meeting are not taking place any more, as they are too busy, and do not have the time, as well as it is expensive for people to go from one end of the country to another. He concluded: "*So, no; we are not given enough time and definitely not given enough resources for the important people to know this, the teachers, to get involved*."

Third official indicated that his response is not a criticism of the culture, maintaining that it is an issue of competing demands. He added that when they have the situation with teachers teaching 20 periods, 50 minutes per period, they then do substantial administrative work, then they are all expected to do blended learning, and then they

are all expected to do online learning, and also are expected to do industry visits. He said that this is too much.

The fourth official agrees with the statement believing that they do that and that all faculties are aware of the changes required somewhere because of awareness or private changes. He added that they also know they need an organisational change within the system to drive more quality.

The fifth official claims that it can do better and does not think that they have organised the issue of organisational change process. He said: "*what we have is mostly organisational change, but not much process, we just change. We have a call; please admit 500 new students this week, that is a massive change, but it is hard to think of the process to work. We do a lot of change but we do not do much change process. I do not know why but we are changing quickly*."

6.16.4 Culture Helps Implement Holistic Quality Approaches

Managers were finally asked if they think that HCT culture helps implement holistic quality approaches such as total quality management (TQM). The first official thinks that is improving, and where he works they are just entering an application for Dubai Quality Group Award this year aimed at entire emphasis of that approach to quality assurance is on the holistic learning environment catering for the whole students and students' needs, as Sheikh Nihayan said at the conference to develop skills as the global citizens, so he thinks that culture that is articulated at the top of the HCT is absolutely a culture of turning a holistic, well rounded, well skilled individual who can participate at the highest level in the local economy but also understands the international culture.

The second official argues that he has to say that they do because the pace of change in the colleges is so quick. "*We don't even give it a year to see if it is working before we change it. So, before it is finished it is changed without given it time to get through. So, how do we know? And that is not good*, " he claimed. He means relatively that he can say they are not a young institution anymore; "*we have been going since 1988*." He added that the pace of change mirrors what is there in the

outer world; it is changing quickly; "*we need the time for reflection, for thought, before we sit down and say are we doing a good job, and if not, how can we do it. We don't even give it a year to see if it is successful; before it is finished it is changed*."

The third official argues that TQM is an issue of continuous improvement, and thinks that the attempt is there, and people are trying. He also thinks that they understand the need, to certain extent, without even realising that what happens, they have course and programme teams, assistant teams, team leaders, and DAT meetings, and when they have DATs, that all do it. He added: "*The question is it totally integrated, maybe not as good as it could be. But is the culture there? Yes*."

In a follow-up question, he was asked if there is the possibility for improvement. He answered, only in terms of overall coordination, and then he enquired: "*but is it there absolutely? But could it be better coordinated, for instance, I am always surprised that college PACs to put to DATs?*"

The fourth official agrees, to some extent, that that the HCT culture helps implement holistic quality approaches such as TQM; adding that they need to do more. "*In terms of encouraging, yes, but we have other factors coming, such as international accreditation which then adds SACS accreditation to the industry*."

Fifth Official indicated that in the design of the HCT quality assurance system. He commented that: "*Patrick Boyle, who designed it, did not want to do total management, he did not recommend it, he kind of taking a broader approach in our model, it is a process model, but the model we got is holistic, it is very sophisticated lean management model*." He adds that what it does is instead of looking at it, it looks at the process; hence, it is a process quality assurance model.

6.17 Summary

Responses of the HCT managers documented above indicate a set of viewpoints aired by these managers concerning many issues relating to the implementation of the quality programme and organisational culture. This chapter indicates that assuming an active role with regard to the evaluation and improvement of the implemented

quality programme, and at present leadership is dealing with the yearly report. The discussion also indicates the leadership focuses on internal stakeholders, in the present study they refer to staff and students. Leadership also carries out performance review every year, and both HCT's management and leadership utilise the findings of these reviews. In terms of delegating decision-making, managers were divided between agreeing that HCT leadership delegate decision-making to lower levels of management and disagreeing with leadership delegating decision-making. Interviewed managers also indicated that leadership (supervisors, section heads and quality assurance managers) play active roles as facilitators of continuous improvement. Two managers agreed that HCT's leadership's concern with implementation of quality system; the other managers were not asked this question. In terms of strategic planning, managers indicated that they have both short- and long-term strategic planning. With regard to the collection and analysis of staff and student (internal stakeholders) information, all managers interviewed agreed that information relating to internal stakeholders is collected and analysed. In terms of mechanisms for maintaining effective internal stakeholder relationships, managers disagreed about such mechanisms, while one reports the existence of students' representatives groups which work very closely with staff about a whole lot of issues that to do with student welfare, others indicated that they do not have strategy about it, and a great deal of it is *ad hoc* and only when they are asked for it, still another referred to using questionnaire, whereas one official did not know of any mechanism. With regards to implementing a system to generate and analyse measures of internal stakeholder satisfaction and dissatisfaction, managers interviewed indicated that they have such system, such as running focus groups, and using questionnaires. In terms of student focus, managers indicated that they focus on students' needs and satisfaction. The HCT also assesses educational programmes and offerings, though such assessment is patchy according to one of the managers interviewed. Colleges and departments also have clear objectives and targets for key education support processes that are linked to overall HCT goals and objectives. There is an agreement that HCT organisational culture promotes proper implementation of quality programmes, encourages involvement of all internal stakeholders in implementing current quality programme, helps in providing adequate information and opportunity for staff to become more familiar with the organisational change process. However, in terms of HCT culture

helps implement holistic quality approaches such as total quality management (TQM), some managers agrees with this issues whereas others disagreed with it.

CHAPTER SEVEN

ANALYSIS OF SURVEY STUDY

7.1 Introduction

This chapter presents the results of the quantitative data collected from HCT staff and students using the Malcolm Baldrige National Quality Award (MBNQA) Framework (staff questionnaire) and the SERVQUAL-based questionnaire (student questionnaire). In Part One, quantitative data collected from HCT staff are analysed and discussed. Part Two analyses and discusses quantitative data collected from HCT students.

PART ONE: QUANTITATIVE DATA COLLECTED FROM HCT STAFF

7.2 PERSONAL AND ORGANISATIONAL INFORMATION

Two hundred and thirteen staff members responded to the electronically distributed questionnaires on the HCT Website, out of around 2,000 staff members. The response rate was around 10% of the total number of staff. The effort in this respect was that the researcher had to travel to the UAE and visit all campuses distributed throughout the UAE to encourage staff members to answer the questionnaire items. The respondents' demographic and organisational characteristics are explained in this section.

Seventy-nine staff members, out of the 213 participants, were UAE nationals, representing 37.1% of the sample. The remaining 134 participants (62.9% of the sample) were non-UAE nationals, as demonstrated in Figure 7.1.

The distribution of respondent staff according to their gender was almost half split between males (103 respondents, 48.4%) and females (110 respondents, 51.6%), as illustrated in Figure 7.2.

Figure 7.1. Distribution of respondent staff members, according to nationality

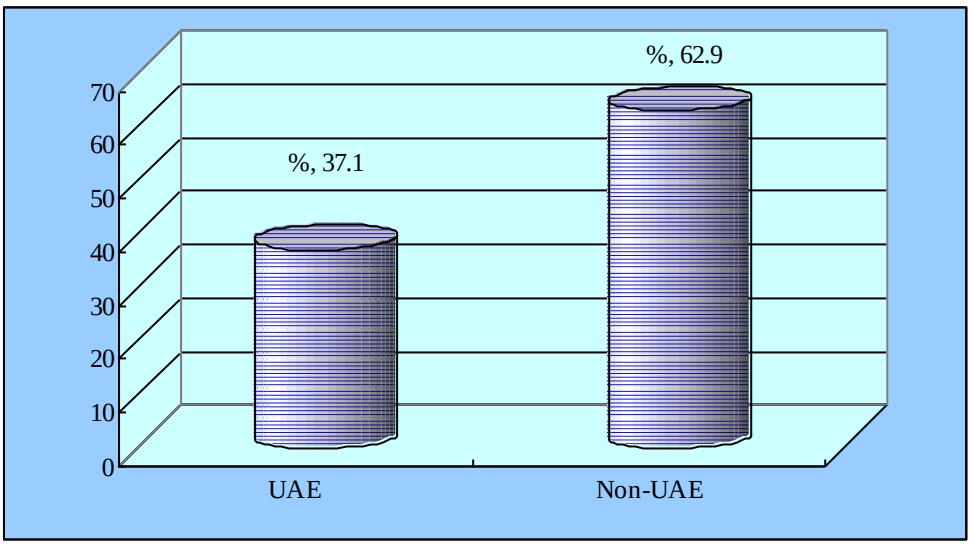
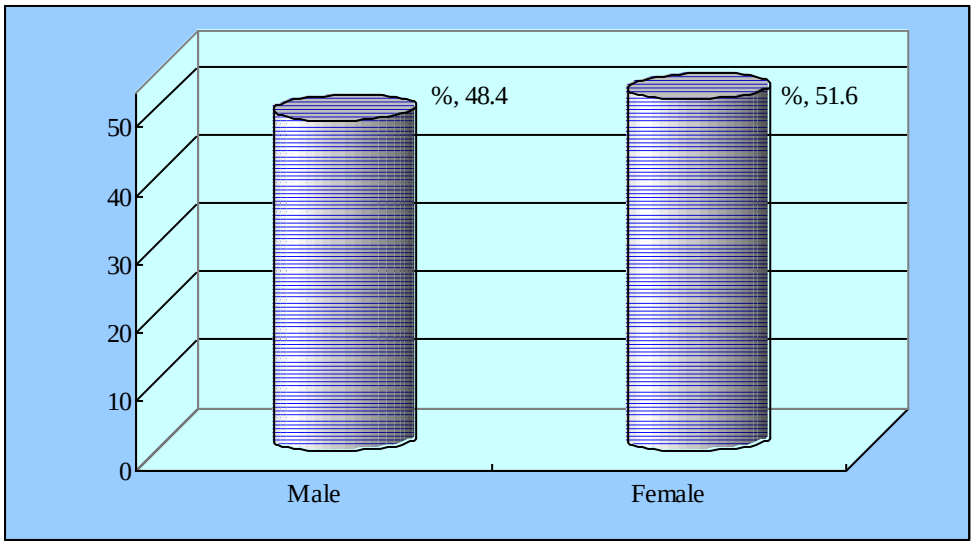
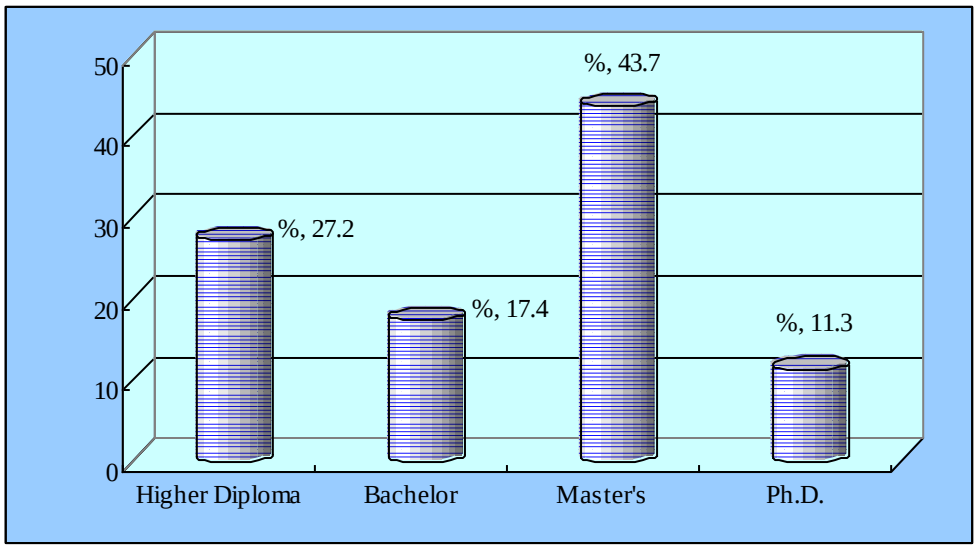


Figure 7.2. Distribution of respondent staff members, according to gender



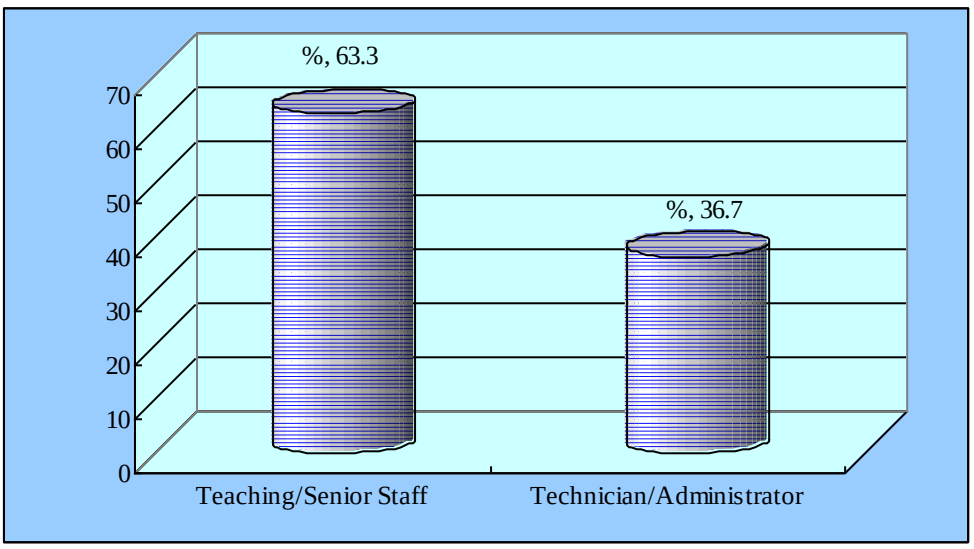
Most of the respondent staff (93, 43.7% of the sample) had Master's Degree, followed by 37 respondents (17.4%) with Bachelor's Degree, and 59 (27.7%) with higher Diploma, as Figure 7.3 illustrates. Staff holding Ph.D. degrees were represented by 24 respondents (11.3% of the sample).

Figure 7.3. Distribution of respondent staff members, according to qualifications.



Slightly less than two-thirds of respondent staff members (135, representing 63.3% of the sample) were teaching/senior staff members. Non-teaching faculty staff members (technicians and administrators) were represented by 78 respondents (36.7% of the sample), as depicted in Figure 7.4.

Figure 7.4. Distribution of respondent staff members, according to position held.



7.3 MBNQA's Descriptive Results

In this section, patterns of responses to the questionnaire items are analysed and discussed, using the Malcolm Baldrige National Quality Award (MBNQA) criteria.

Descriptive statistics of the seven MBNQA criteria, in addition to the eighth criterion added by the researcher, as indicated in Chapter Five (Section 5.4.1), that is, organisational culture, are presented in Appendix IV. The means and standard deviations of the eight criteria are also illustrated in Appendix IV.

7.3.1 Leadership

This category examines, through seventeen 'question' items (see Appendix II, Staff Questionnaire), how the HCT's senior leaders guide and sustain the HCT, as well as it examines HCT's governance and how HCT addresses its ethical, legal, and community responsibilities (Baldrige National Quality Program, 2008).

Table 7.1 clearly illustrate that the mean value for leadership (60.3; 26.4) indicates that the HCT management have some systematic approach in position for the practices and processes mentioned earlier, and that HCT's senior leadership has developed the Colleges' visions which integrate quality values, performance expectations, and a focus on staff and students.

Table 7.1. Descriptive statistics of the Leadership variable with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Leadership	213	17	119	60.3	26.4

This finding also indicates that the senior leaders have evaluated and improved leadership system, such as, the way of using their review of the HCT's performance, and staff feedback in the evaluation process. For example, the majority of respondents agreed with a large number of the Leadership Items.

This demonstrates that there is more consideration for such issues by the senior leadership. It can be argued that this mean represents more than half the respondents, which indicates that many of the respondents agreed with most of the items. It shows

that the HCT leadership is in continuous communication with its staff, and that the HCT governance system is in control to ensure monitoring the performance of management. Results also indicate that HCT management engages external bodies, such as, industry feedback, to perform its performance reviews and offerings, and also indicate that the HCT management performance evaluation is always supported by feedback and survey data from staff. These are important areas that the HCT management has considered them more effectively in order to substantiate the role of leadership, given that leadership is the major driver in the MBNQA (Badri et al., 2006).

7.3.2. Strategic Planning

This category examines, through nine 'question' items, HCT strategy development process, including how the HCT develops strategic objectives and action plans, and related faculty and staff resource plans (Baldrige National Quality Program, 2008). It also examines how strategic objectives and action plans are deployed and changed if circumstances require, and how progress is measured. Strategic planning category emphasises that learning-centred education, long-term organisational sustainability, and the competitive environment are major strategic issues which require to be integral parts of the organisation's overall planning (Baldrige National Quality Program, 2008).

Table 7.2 shows that the mean value for strategic planning (32.4; 14.2) represents more than half of the staff, which indicates that the HCT has a systematic approach in position for the practices and processes mentioned before.

Table 7.2. Descriptive statistics of strategic planning variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Strategic Planning	213	9	63	32.4	14.2

It can be argued that this mean is more than half of the maximum (63) (Table 7.2), which indicates that many of the respondents agreed with questionnaire items. This

demonstrates that there is a good consideration for such issues by the HCT strategic planning.

7.3.3 Student Focus

This category examines, through fifteen 'question' items, how HCT builds relationships to attract, satisfy, and retain students and to increase student loyalty. It also describes how HCT determines student and staff satisfaction and dissatisfaction (Baldrige National Quality Program, 2008). This category addresses how the organisation seeks out to understand the voice of the customer, that is, input from students and of the organisation's markets, with a focus on meeting students' requirements, needs, and expectations; delighting students; and building loyalty (Baldrige National Quality Program, 2008).

The mean value for strategic planning items (53.6; 23.9) (Table 7.3) indicates that the HCT have a good systematic approach in position for the practices and processes mentioned earlier.

Table 7.3. Descriptive statistics of student focus variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Student Focus	213	15	105	53.6	23.9

More than half of the respondents agreed with the majority of question items in this category. This demonstrates that there is more consideration for such issues in the HCT's focus on students. This can be attributed to the fact that the mean represents more than half of the respondents, which indicates that many respondents agreed with most of the items.

7.3.4 Measurement, Analysis, and Knowledge Management (MAKM)

This Category examines, through nine 'question' items, how the HCT selects, gathers, analyses, manages, and improves its data, information, and knowledge assets and how it manages its information. The Category also examines how HCT reviews and uses reviews to improve its performance (Baldrige National Quality Program, 2008). The Baldrige National Quality Program (2008) refers to this Category as the key point within the Criteria for all strategic information concerning effectively measuring, analysing, and improving performance and managing organisational knowledge to drive improvement in student and operational performance. Simply put, this Category is the "brain centre" for the alignment of the organisation's programmes and offerings with its strategic objectives, and vital to this use of data and information are their quality and availability. The Baldrige National Quality Program (2008) also maintains that as information, analysis, and knowledge management might be core competencies which provide an advantage in the market or service environment, this Category also includes these strategic considerations.

The mean value for MAKM (28.6; 13.5) (Table 7.4), which represents the responses of more than half of the respondents, indicates that the HCT has a systematic approach in position for the practices and processes mentioned earlier.

Table 7.4. Descriptive statistics of MAKM variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Measurement, Analysis, and Knowledge Management	213	9	63	28.6	13.5

7.3.5 Staff Focus

The Staff Focus Category [referred to in Baldrige's National Quality Program (2008) as Faculty and Staff Focus] examines, through seventeen 'question' items, how the HCT engages, manages, and develops it workforce to utilise its full potential in alignment with the HCT's overall mission, strategy, and action plans. The Category

examines the HCT's ability to assess workforce capability and capacity needs and to build a workforce environment conducive to high performance (Baldrige National Quality Program, 2008). It addresses main workforce practices, that is, practices that are directed toward creating and maintaining a high-performance workplace with a strong focus on students and learning and toward engaging the organisation's workforce to enable it and the organisation to adapt to change and to succeed (Baldrige National Quality Program, 2008).

The high mean value of 63.5; 27.9 (Table 7.5) demonstrates that the HCT have a good systematic approach in place for the practices and processes mentioned before, given the agreement of all respondents with the questionnaire items in this category due to the fact that this mean represents more than half of the respondents.

Table 7.5. Descriptive statistics of Staff Focus variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Staff Focus	213	17	119	63.5	27.9

7.3.6 Process Management

The Process Management Category examines, through seven 'question' items, how HCT determines its core competencies and work systems and how it designs, manages, and improves its key processes for implementing those work systems to deliver student and staff value and achieve organizational success and sustainability. It also examines is the organisation's readiness for emergencies (Baldrige National Quality Program, 2008). This Criterion is the central point within the Criteria for the organisation's key work systems and work processes. According to the Baldrige National Quality Program (2008), the main requirements for identification and management of the organisation's core competencies are built into the Category to achieve efficient and effective work process management: effective design; a focus on student learning; a prevention orientation; linkage to students, staff, suppliers, partners, and collaborators and a focus on value creation for all key stakeholders; operational performance; cycle time; emergency readiness; and evaluation, continuous improvement, and organisational learning.

The mean value of 23.6; 11.3, which is slightly more than half of the maximum value calculated (49) (Table 7.6) clearly demonstrates that the HCT have a systematic approach in place for the practices and processes mentioned earlier.

Table 7.6. Descriptive statistics of Process Management variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Process Management	213	7	49	23.6	11.3

Most respondents agreed with all seven 'question' items of this category. This demonstrates that there is acceptable consideration for such issues by the HCT process management. This pattern of responses can be attributed to the fact that the HCT attempts to reach a high national position rapidly and also to match the progress at the international level in a short period of time to match labour market requirements.

7.3.7 Results

The Results category examines, through sixteen 'question' items, HCT's performance and improvement in all key areas — student learning outcomes; student- and staff-focused outcomes; budgetary, financial, and market outcomes; process effectiveness outcomes; and leadership outcomes. Performance levels are examined relative to those of competitors and other organisations providing similar programmes and services (Baldrige National Quality Program, 2008). This Category provides a results focus which includes the organisation's students' learning; students' and staff evaluation of the organisation's programmes, offerings, and services; the organisation's overall budgetary, financial, and market performance; the organisation's workforce results; the organisation's leadership system and social responsibility results; and results of all major processes and process improvement activities (Baldrige National Quality Program, 2008). It is through such focus that the Criteria's purposes (superior value of offerings as viewed by the organisation's students, staff, and markets; superior organisational performance as reflected in the organisation's operational, workforce, legal, ethical, and financial indicators; and organisational and personal learning) are maintained (Baldrige National Quality Program, 2008). Hence, this category provides "real-time" information, that is,

measures of progress, for evaluation and improvement of educational programmes, offerings, and services and the organisation's processes, in line with the organisation's overall organisational strategy (Baldrige National Quality Program, 2008).

The mean value of 53.9; 23.9 (Table 7.7), which represents more than half of the respondents, clearly demonstrates that HCT have a systematic approach in place for the practices and processes, due to this high mean value.

Table 7.7. Descriptive statistics of Results variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Results	213	16	112	53.9	23.9

Most of the respondents agreed with all items in this category, which demonstrates that there is good consideration for such issues in the HCT's results. Results category has been affected by the good performance in the other six categories.

7.3.8 Organisational Culture

This category is added by the researcher to the seven categories of Malcolm Baldrige Education Criteria for Performance Excellence. It is anticipated that HCT culture will have an impact on the seven categories mentioned above, as will be discussed later in this work. This is due to the fact that the Malcolm Baldrige Education Criteria for Performance Excellence is formulated within the context of the American culture, which is totally different from that of the UAE's culture. It is also imperative to identify the impact of organisational culture on the productivity and quality, as culture might have a critical impact on enhancing productivity and quality (Mathew, 2007). This category examines, through eight 'question' items, how HCT organisational culture influences flexible implementation of the quality programmes, encourages involvement of all staff and students in the implementation of the current quality programme, promotes innovative approaches by HCT staff, helps in providing adequate information and opportunity for staff to become more creative, helps develop a holistic approaches to quality, for example, total quality management (TQM), how HCT Management actively seeks new ideas staff have opportunities to

use their skills effectively in their jobs, and how they are encouraged to find new methods and ways of doing things.

The high mean value of 29.5; 14.6, which represents more than half of the respondents (Table 7.8) clearly demonstrates that the HCT have a systematic approach in place for the practices and processes mentioned earlier.

Table 7.8. Descriptive statistics of Organisational Culture variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Organisational Culture	213	8	56	29.5	14.6

Most of the respondents agreed with the questionnaire items in this category, which demonstrates that there is a good consideration for such issues in the HCT's organisational culture.

7.4 Inferential Results between MBNQA Variables

Staff questionnaire findings were statistically analysed, using SPSS statistical packages to generate frequencies and percentages of responses to the different questions included in the staff questionnaires. Furthermore, the relationships between variables of the MBNQA categories were established using correlations and partial correlation statistics.

In order to test the relationship between independent variables and dependent variables, bivariate analysis methods are employed using the correlation given that the notion of correlation is one of the imperative and fundamental in the explanation of bivariate relationships (Bryman and Cramer, 2009).

For the purposes of the present study and in order to test the hypotheses, four sets of hypotheses have been suggested. In the first set, concerning hypotheses related to Quality Management Infrastructure, two hypotheses were suggested:

$H_{1.1}$: *'Strategic Planning' is related to 'Leadership' and 'MAKM', and*

$H_{1.2}$. *'Staff Focus' is related to 'Leadership' and 'MAKM'.*

The second set of hypotheses is related to the Quality Management Processes and includes four hypotheses:

$H_{2.1}$: *'Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM'.*

$H_{2.2}$: *The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus'*

$H_{2.3}$: *'Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'.*

$H_{2.4}$: *The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus'*).

The third set of hypotheses relates to the Quality Performance and include two hypotheses:

$H_{3.1}$: *'Results' is related to 'Process Management' and 'Student Focus'.*

$H_{3.2}$: *The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'Staff Focus' and 'Student Focus'*).

The fourth set of hypotheses includes one hypothesis related to the Organisational Culture:

$H_{4.1}$: *There is a relationship between 'Organisational Culture' and 'Leadership', 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'*).

7.4.1 Hypotheses Related to Quality Management Infrastructure

Quality management is defined and measured in empirical studies as "*practices of organizations that implement principles such as customer focus, continuous improvement, and teamwork to improve product and service quality*" (Zu, 2009, p. 129). Zu (2009) demonstrated that infrastructure quality management factor has a direct and significant correlation with top management support, customer relationship, supplier relationship, and workforce management, and also a direct correlation with core quality management factor. He also shows that infrastructure quality management has an indirect relationship with quality information, product/service design, and process management mediated by core quality management factor.

Pannirsalvam and Ferguson (2001) indicate that several studies in the 1990s have taken more organisational view of quality and included infrastructural elements, for example, information management and human resources management. In their comprehensive study on quality practices, quality management infrastructures, and performance based on a survey of US factories in the machinery, electronics and transportation industries, Flynn et al. (1995) indicate that top management support and supplier relationship had a direct effect on the performance of the product design, and top management support and workforce management had a direct effect on process flow.

There is a subset of two hypotheses under this heading. This first concerns the relationship between Strategic Planning and Leadership and MAKM, whereas the second concerns the relationship between Staff Focus and Leadership and MAKM.

$H_{1.1}$: *'Strategic Planning' is related to 'Leadership' and 'MAKM', and*

$H_{1.2}$. *'Staff Focus' is related to 'Leadership' and 'MAKM'.*

Test of $H_{1.1}$: 'Strategic Planning' Is Related to 'Leadership' and 'MAKM.

This hypothesis addresses the relationship between Strategic Planning, Leadership and MAKM. The results of this study, presented in Table 7.9, show a significant

correlation of 0.92 between Leadership and Strategic Planning, and also a significant correlation of 0.82 between Strategic Planning and MAKM.

Table 7.9. Correlation between Strategic Planning, Leadership and MAKM

	Strategic Planning		
	R	**p**	**n**
Leadership	0.92	0.000	213
MAKM	0.82	0.000	213

Figure 7.5 illustrates the relationship between strategic planning, leadership and MAKM. This Figure clearly demonstrates that Strategic Planning is influenced directly by Leadership. Furthermore, it also indicates that Strategic Planning is also influenced directly by MAKM.

Figure 7.5. The relationship between Strategic Planning, Leadership and MAKM.

Strategic Planning is defined as the "*set of processes undertaken in order to develop a range of strategies that will contribute to achieving the organizational direction*" (Tapinos et al., 2005, p. 371). These authors referred to the different definitions of strategic planning reported in the literature, maintaining that a very inclusive definition is "*strategic planning attempts to systematise the processes that enable an organization to attain its goals and objectives. There are five general steps in the strategic planning process: goal/objective setting, situation analysis, alternative consideration, implementation and evaluation*" (Crittenden and Crittenden, 2000).

Leadership has a direct effect on Strategic Planning due to the fact that it is the driving force by setting the organisational direction and seeking future opportunities for the organisation (Baldrige National Quality Program, 2008, p. 1). MAKM has a direct influence on Strategic Planning, given that MAKM is vital in effective planning and execution of the plans (Pannirselvum and Ferguson, 2001). It is also through MAKM that strategic plans can be formulated by the leadership.

Test of $H_{1.2}$: 'Staff Focus' is related to 'Leadership' and 'MAKM'.

This hypothesis deals with the relationship between Staff Focus, Leadership and MAKM. The results of this study, presented in Table 7.10, reveal a significant correlation of 0.84 between Staff Focus and Leadership, and a significant correlation of 0.82 between Staff Focus and MAKM.

Table 7.10. Correlation between staff focus, leadership and MAKM

	Staff Focus		
	R	**p**	**n**
Leadership	0.84	0.000	213
MAKM	0.82	0.000	213

Figure 7.6 shows the relationship between staff focus, leadership and MAKM. It clearly demonstrates that Staff Focus is influenced directly by Leadership. Furthermore, it also indicates that Staff Focus is also influenced directly by MAKM.

Figure 7.6. The relationship between staff focus, leadership and MAKM.

The workforce is the most valuable resource of an organisation. Staff are also the implementers of the organisation's system, decisions, practices and operations. In this case, Staff Focus is influenced by leadership through the latter motivating, engaging, managing, and developing staff to utilise their full potential in alignment with the organisation's overall mission, strategy, and action plans. On the other hand, MAKM influences Staff Focus through providing clear information that would help staff to work towards achieving the organisation's mission, goals and objectives. Furthermore, information is affected through the decisions made by the leadership, for which staff have the responsibility to implement and execute these decisions.

7.4.2 Hypotheses Related to the Quality Management Processes

The quality of the management processes depends upon "*an understanding of how people learn, how they interact, and how they sustain, develop, or even destroy, a culture*" (Hodgkinson and Kelly, 2007, p. 78). These authors argue, however, that though understanding is the basis, it is also essential for well articulated methods of evaluation of the management processes involved. These methods, often referred to as quality audits or annual monitoring and review, generally involve audit trails which map the extent of coherence of the system, the links between various components, and the closure of feedback loops in the system (Hodgkinson and Kelly, 2007).

There is a subset of four hypotheses under this heading, including the following:

$H_{2.1}$: *'Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM.'*

$H_{2.2}$: *The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'*

$H_{2.3}$: *'Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'.*

$H_{2.4}$: *The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'*

Test of $H_{2.1}$: Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM.'

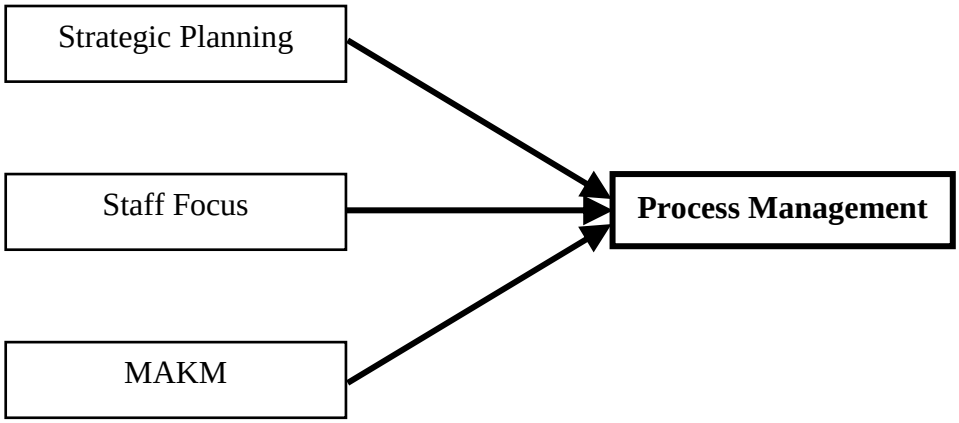
This hypothesis tackles the relationship between Process Management, Strategic Planning, Staff Focus, and MAKM. The results of the present study, presented in Table 7.11, indicate a significant correlation of 0.78 between process management and strategic planning, 0.86 between process management and staff focus, and 0.86 between process management and MAKM.

Table 7.11. Correlation between process management, staff focus, strategic planning, staff focus, and MAKM

	Process Management		
	R	**p**	**n**
Strategic Planning	0.78	0.000	213
Staff Focus	0.86	0.000	213
MAKM	0.86	0.000	213

Figure 7.7 illustrates the relationship between Process Management, Strategic Planning, Staff Focus, and MAKM. Figure 7.7 clearly demonstrates that Process Management is influenced directly by Strategic Planning. It also illustrates the influence of Staff Focus on Process management, as well as the influence of MAKM on Process Management.

Figure 7.7. The relationship between process management, strategic planning, staff focus, and MAKM



Process Management plays an important role being the focal point within the organisation for all key processes (Badri et al., 2006). Process Management is responsible for all operational processes and practices.

Firstly, Process Management is influenced by Strategic Planning due to the fact that all strategic decisions made need to be processed and delivered through process management on a daily and term basis. Secondly, Process Management is influenced by Staff Focus given the fact that Staff are the implementers and executors of strategic plans made by the Leadership. Finally, Process Management is also affected by

MAKM through providing information and knowledge to the Leadership to help them make their decisions and to facilitate the implementation of these decisions by the staff.

Tummala and Tang (1996, p. 20) indicate that Process Management, Staff Focus, Strategic Planning, and MAKM "*provide a system to develop well-defined and well-designed processes for meeting customer satisfaction and corporate performance requirements.*" Table 7.11 indicates a highly significant correlation between the four System Criteria and that Strategic Planning, Staff Focus, and MAKM have significant influence on Process Management.

Test of $H_{2.2}$: The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'

This hypothesis deals with the indirect relationship between Process Management, and Leadership through Strategic Planning and Staff Focus. Table 7.12 shows the relationship between these four Criteria.

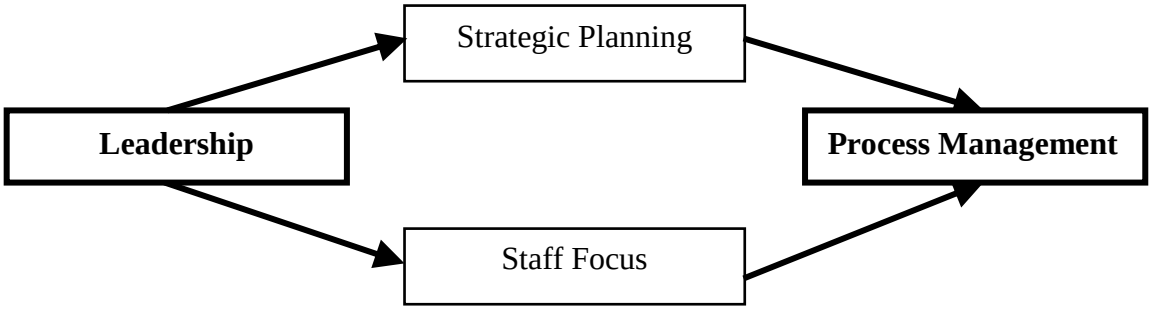
Table 7.12. Correlation between Leadership, Process Management, Strategic Planning and Staff Focus

	Leadership			**Process Management**		
	r	p	N	r	p	n
Strategic Planning	0.92	0.000	213	0.78	0.000	213
Staff Focus	0.84	0.000	213	0.86	0.000	213

Figure 7.8 illustrates the indirect relationship between process management and leadership. Figure 7.8 indicates that the relationship between Leadership and Process Management is established through Strategic Planning and Staff Focus given that Leadership directly influences Strategic Planning. On the other hand, Process Management is directly influenced by Strategic Planning. In addition, Leadership relationship with Process Management is established through the Staff Focus, since Leadership directly influences the Staff Focus, and Process Management is directly influenced by Staff Focus. This indicates that Leadership influences Process Management indirectly through both Strategic Planning and Staff Focus.

Leadership, as discussed earlier, influences Strategic Planning and Staff Focus (Hypotheses $H_{1.1}$ and $H_{1.2}$). Furthermore, as indicated earlier in $H_{2.1}$, Strategic Planning and Staff Focus influence Process Management.

Figure 7.8. The indirect relationship between leadership and process management through strategic planning and staff focus.



The extent of the strong relationship between Leadership and Process Management, as mediated by Strategic Planning and Staff Focus is presented in Table 7.13 and Figure 7.9 A and B.

Table 7.13. Partial Correlation between Leadership, Process Management, Strategic Planning and Staff Focus

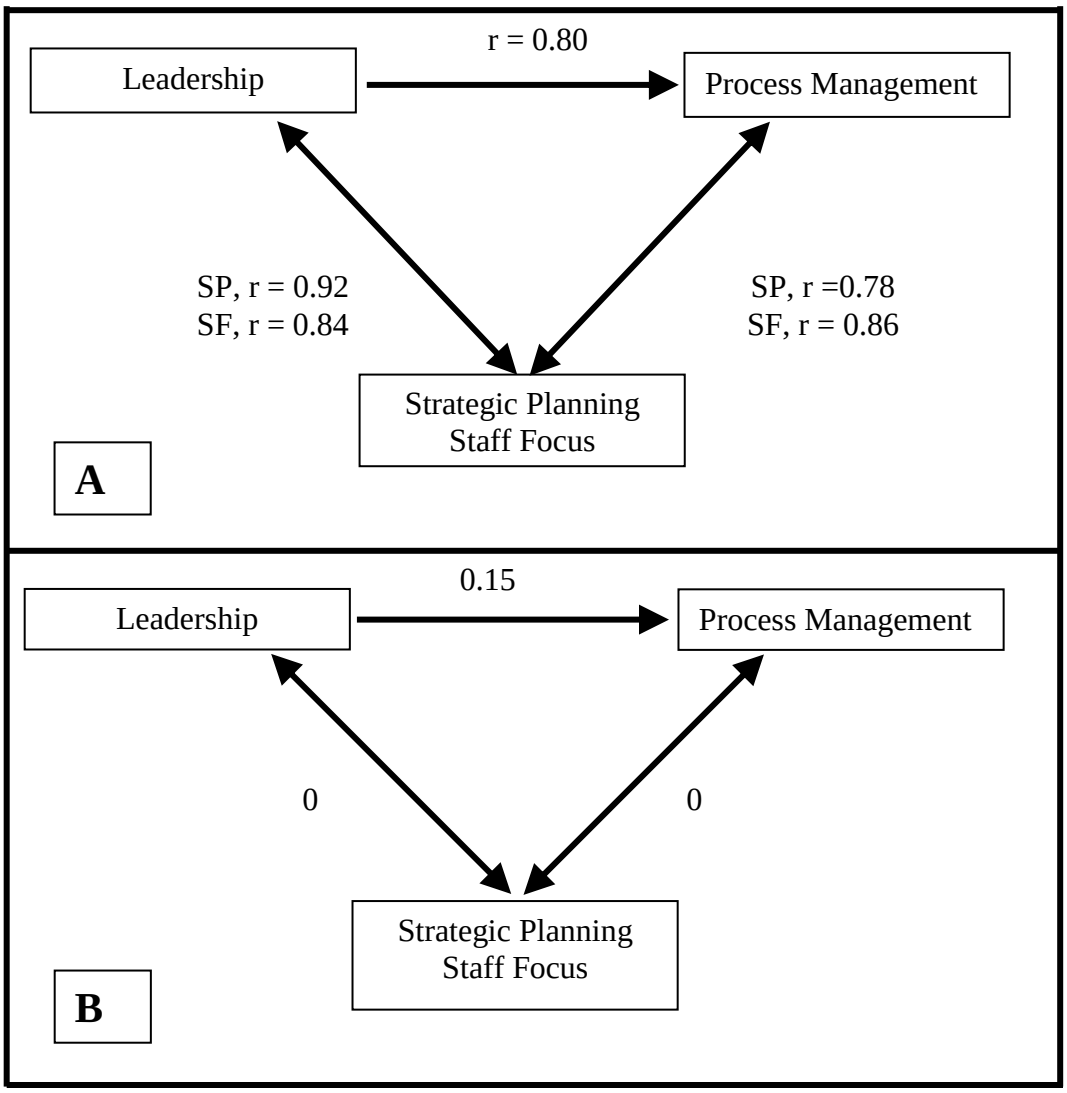
Control Variables		**Leadership**	**Process Management**
Staff Focus and	Correlation		0.15
Strategic Planning	Significance*		0.03
	Correlation	0.15	
	Significance*	0.03	

*Two-tailed significance at <0.05.

The partial correlation between Leadership and Process Management controlling for Strategic Planning and Staff Focus is 0.15. This result is very important due to the fact that Strategic Planning and Staff Focus Criteria are playing an important role in strengthening the relationship between Leadership and Process Management. This indicates that the relationship between Leadership and Process Management is strongly influenced through the control variables, Strategic Planning and Staff Focus, as illustrated in Figure 7.9 A and B.

Figure 7.9. A. Correlation between Leadership (LP) and Process Management (PM), as mediated by Strategic Planning (SP) and Staff Focus (SF) (r = correlation coefficient)

Figure 7.9. B. Partial correlation between Leadership and Process Management



Test of $H_{2.3}$: 'Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'.

This hypothesis tackles the relationship between Student Focus, Strategic Planning, Staff Focus and MAKM. The results of the present study, illustrated in Table 7.14, indicate a significant correlation of 0.84 between Student Focus and Strategic

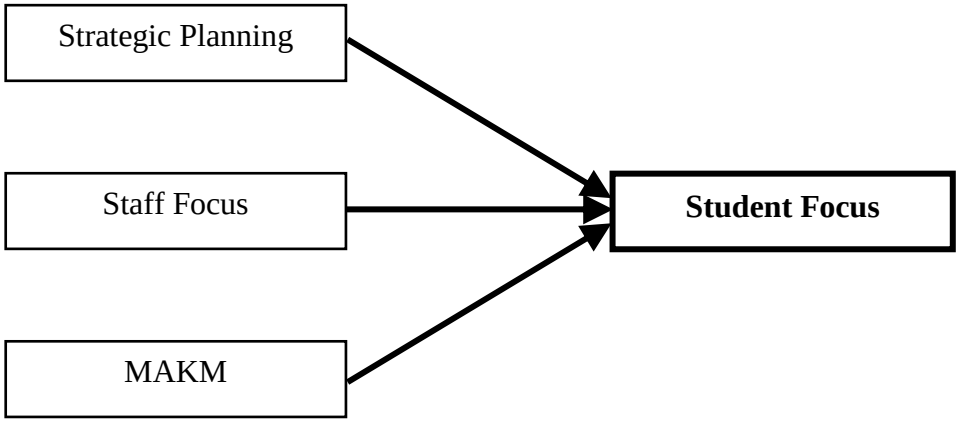
Planning, 0.85 between Student Focus and Staff Focus, and 0.89 between Student Focus and MAKM.

Table 7.14. Correlation between Student Focus, Staff Focus, Strategic Planning and MAKM

	Student Focus		
	R	**p**	**n**
Strategic Planning	0.84	0.000	213
Staff Focus	0.85	0.000	213
MAKM	0.89	0.000	213

Figure 7.10 illustrates the relationship between Student Focus, Strategic Planning, Staff Focus, and MAKM. Figure 7.10 shows that Student Focus is influenced directly by Strategic Planning. It also depicts the influence of Staff Focus on Student Focus, and the influence of MAKM on Student Focus.

Figure 7.10. The relationship between student focus, strategic planning, staff focus and MAKM.



Student focus dimension in the Baldrige Education Criteria for Performance Excellence includes two categories: Students, which describes how the organisation determines requirements, needs, expectations, and preferences of students to ensure the continuing relevance of its educational programmes, offerings, and services; to develop opportunities for new programmes, offerings, and services; and to create an overall climate conducive to learning and development for all students; and Student Satisfaction, which describes how the organisation builds relationships to attract, satisfy, and retain students and to increase student loyalty, and how the organisation

determines student satisfaction and dissatisfaction (Baldrige National Quality Program, 2008).

Student Focus is influenced by Strategic Planning due to the fact that many strategic decisions relates to students and their future career, for example, offering new programmes, and providing recent developments in technology, offering out of class facilities, such as sports centres, canteens, etc. Student Focus is also influenced by Staff Focus given the fact that the Staff deliver the programmes, with students directly, resolve students' difficulties and problems, as well supervising them. Student Focus is also affected by MAKM since students are at the receiving end of the decisions made by the Leadership, in terms of making decisions concerning relevant courses, and following students up during their study and after graduation, as alumni.

Test of $H_{2.4}$: The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus.'

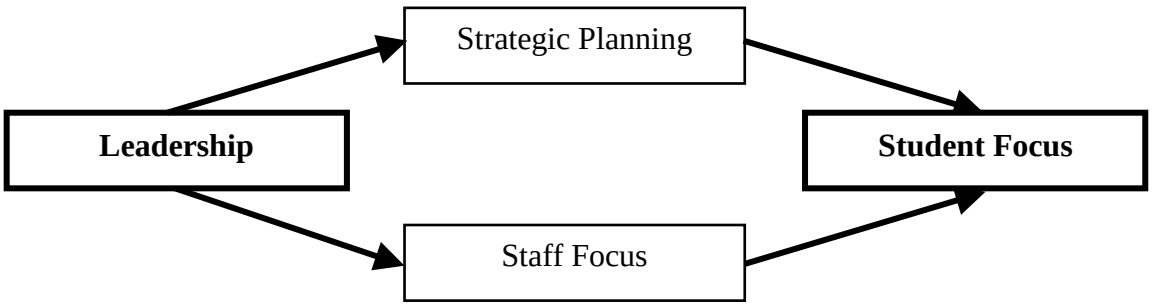
This hypothesis deals with the indirect relationship between Student Focus and Leadership through Strategic Planning and Staff Focus. The relationship between Leadership, Student Focus, Strategic Planning and Staff Focus is illustrated in Table 7.15.

Table 7.15. Correlation between Leadership, Student Focus, Strategic Planning and Staff Focus

	Leadership			**Student Focus**		
	r	p	n	r	p	n
Strategic Planning	0.92	0.000	213	0.84	0.000	213
Staff Focus	0.84	0.000	213	0.85	0.000	213

Figure 7.11 illustrates this indirect relationship between leadership and Student Focus. Figure 7.11 clearly shows that the relationship between Leadership and Student Focus is established through Strategic Planning given that Leadership directly influences Strategic Planning, and through this Strategic Planning influences Student Focus. Furthermore, Leadership relationship with Student Focus is established through the Staff Focus, since Leadership directly influences the Staff Focus, and Staff Focus directly influences Student Focus. This indicates that Leadership influences Student Focus indirectly through both Strategic Planning and Staff Focus.

Figure 7.11. The indirect relationship between leadership and student focus through strategic planning and staff focus.



The extent of the strong relationship between Leadership and Student Focus, as mediated by Strategic Planning and Staff Focus is presented in Table 7.16 and Figure 7.12 A and B.

Table 7.16. Partial Correlation between Leadership, Student Focus, Strategic Planning and Staff Focus

Control Variables		**Leadership**	**Student Focus**
Strategic Planning	Correlation		0.25
and Staff Focus	Significance		0.00
	Correlation	0.25	
	Significance	0.00	

The partial correlation between Leadership and Student Focus controlling for Strategic Planning and Staff Focus is 0.25. This result is highly significant due to the fact that Strategic Planning and Staff Focus Criteria are playing an essential role in strengthening the relationship between Leadership and Student Focus. This indicates that the relationship between Leadership and Student Focus is effectively influenced through the control variables, Strategic Planning and Staff Focus, as illustrated in Figure 7.12 A and B.

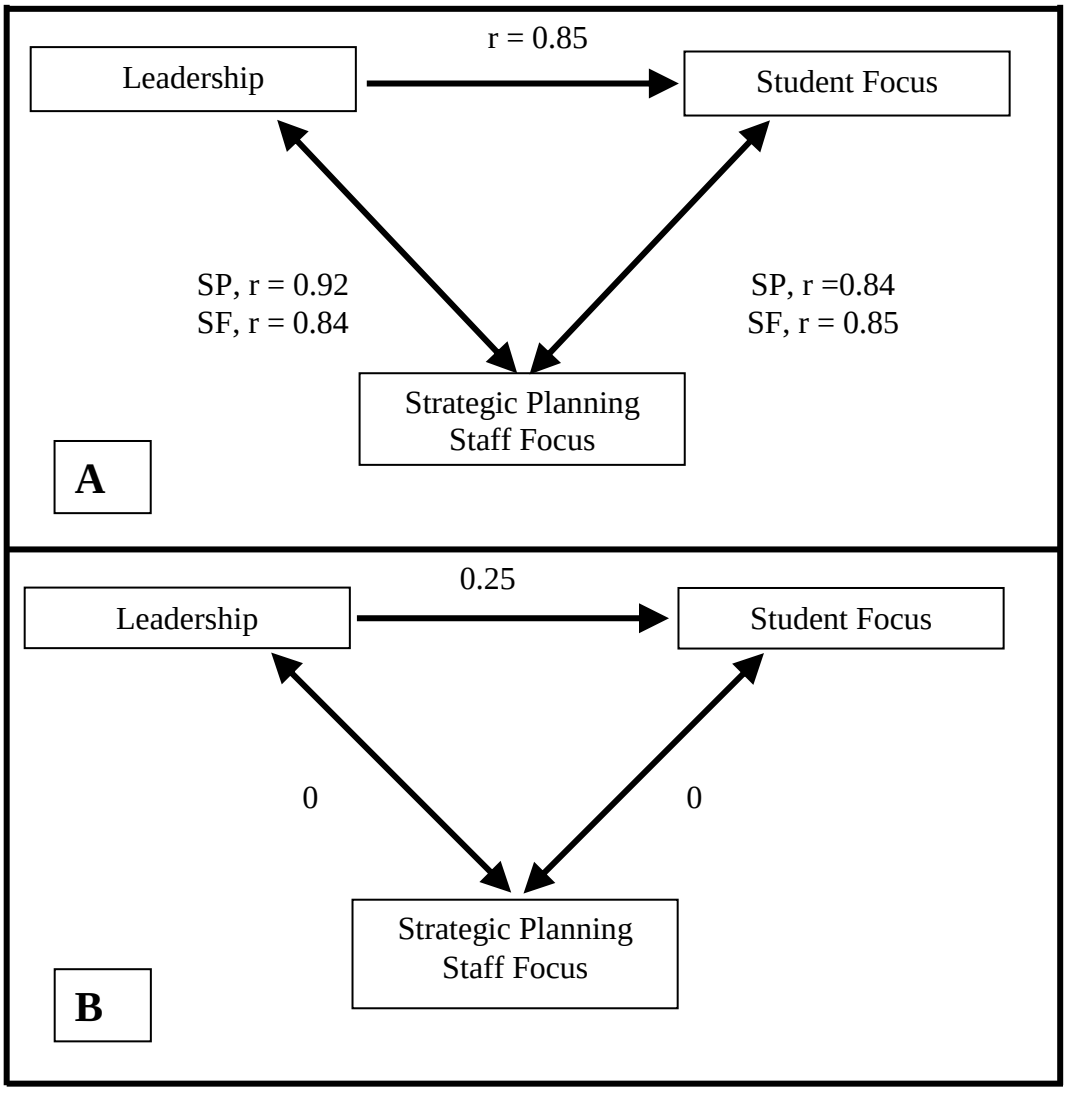
7.4.3 Hypotheses Related to the Quality Performance

Barnett (1994, p. 68) clearly expressed the concerning on the topic of the concept of quality in higher education, arguing that: "*What counts as quality is contested. The different views of quality generate different methods of assessing quality and in*

particular alternative sets of performance indicators (PIs)." Barnett, however, argues that the PIs are very limited in their informational content, having nothing to tell about the quality of educational process.

Figure 7.12. A. Correlation between Leadership (LP) and Student Focus (StF), as mediated by Strategic Planning (SP) and Staff Focus (SF) (r = correlation coefficient)

Figure 7.12. B. Partial correlation between Leadership and Student Focus.



There are a number of performance measures used to assess the quality of educational provision, though the most significant ones [in the UK] are those of the QAA and the RAE (Research Assessment Exercise), both having a substantial impact on the manner in which faculties devise the key success factors and prioritise and organise their activities (Cullen et al., 2003).

There is a subset of two hypotheses under this heading:

$H_{3.1}$: 'Results' is related to 'Process Management' and 'Student Focus.'

$H_{3.2}$: The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'Staff Focus' and 'Student Focus'.

Test of $H_{3.1}$: 'Results' is related to 'Process Management' and 'Student Focus.'

This hypothesis tackles the relationship between Results, Process Management and Student Focus. The results of this study, presented in Table 7.17, demonstrate a significant correlation of 0.84 between Results and Process Management, and a significant correlation of 0.84 between Results and Student Focus.

Table 7.17. Correlation between Results, Process Management and Student Focus

	Results		
	R	**p**	**n**
Process Management	0.84	0.000	213
Student Focus	0.84	0.000	213

Figure 7.13 shows the relationship between Results with Process Management and Student Focus. Figure 6.13 shows that Results is directly affected by Process Management. It also shows the influence of Student Focus on Results.

Figure 7.13. The relationship between Results, Process Management and Student Focus.

Results examine the organization's performance and improvement in all key areas, including student learning outcomes; student-focused outcomes (Malcolm Baldrige National Quality Program, 2008).

Results category provides a results focus that includes student learning; and student satisfaction. Besides, initiatives seek to create a positive, productive, learning-centred,

and supportive work environment; governance structure and social responsibility; and recognition of results for all key processes and process improvement activities (Badri et al., 2006).

Process Management influences Results in terms of the implementation of Strategic Planning and utilisation of information. Since process management represents the extent of the Staff knowledge in implementing and executing plans; hence, Process Management directly influences the Results. Student Focus influences Results by way of students' knowledge acquired through their study that would help them apply this knowledge in their career. Students Focus is influenced by the accuracy of the information which affect taking decisions and these decisions affect students through the staff who implement and execute them.

Test of $H_{3.2}$: The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'Staff Focus' and 'Student Focus'.

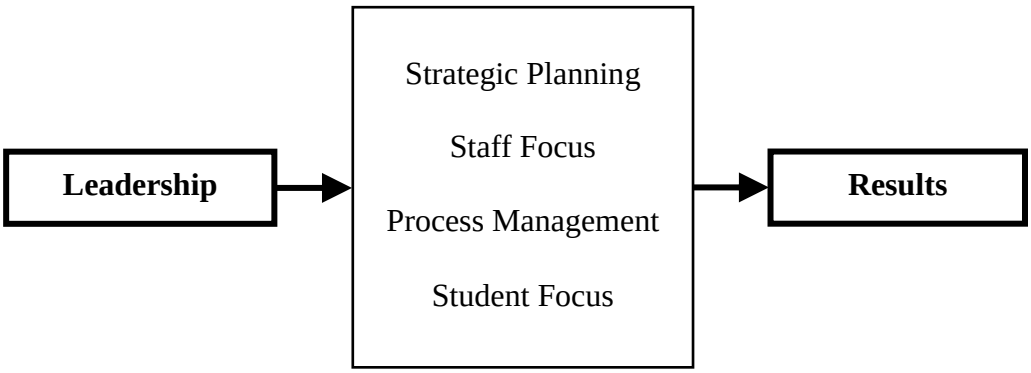
This hypothesis deals with the indirect relationship between Results and Leadership through Strategic Planning, Process Management, Staff Focus and Student Focus (Table 7.18).

Table 7.18. Correlation between Leadership, Results, Strategic Planning, Staff Focus, Process Management and Student Focus

	Leadership			**Results**		
	r	p	n	r	p	n
Strategic Planning	0.92	0.000	213	0.84	0.000	213
Staff Focus	0.84	0.000	213	0.85	0.000	213
Process Management	0.80	0.000	213	0.84	0.000	213
Student Focus	0.85	0.000	213	0.84	0.000	213

Figure 7.14 illustrates the indirect relationship between Leadership and Results. This indicates that Leadership is linked to Results indirectly through Strategic Planning, Process Management, Staff Focus and Student Focus. These four criteria strongly influence the relationship between Leadership and Results.

Figure 7.14. The indirect relationship between Leadership and Results through strategic planning, staff focus, Process Management and Student Focus.



Leadership and Results have been defined earlier in this chapter. As indicated earlier, Leadership directly influences Strategic Planning and Staff Focus ($H_{1.1}$ and $H_{1.2}$). Leadership is indirectly influences Process Management ($H_{2.2}$) and Student Focus ($H_{2.4}$). Furthermore, Strategic Planning, Staff Focus, Process Management, and Student Focus influence Results directly and indirectly.

The extent of the strong relationship between Leadership and Results, as mediated by Strategic Planning, Staff Focus, Process Management and Student Focus is presented in Table 7.19 and Figure 7.15 A and B.

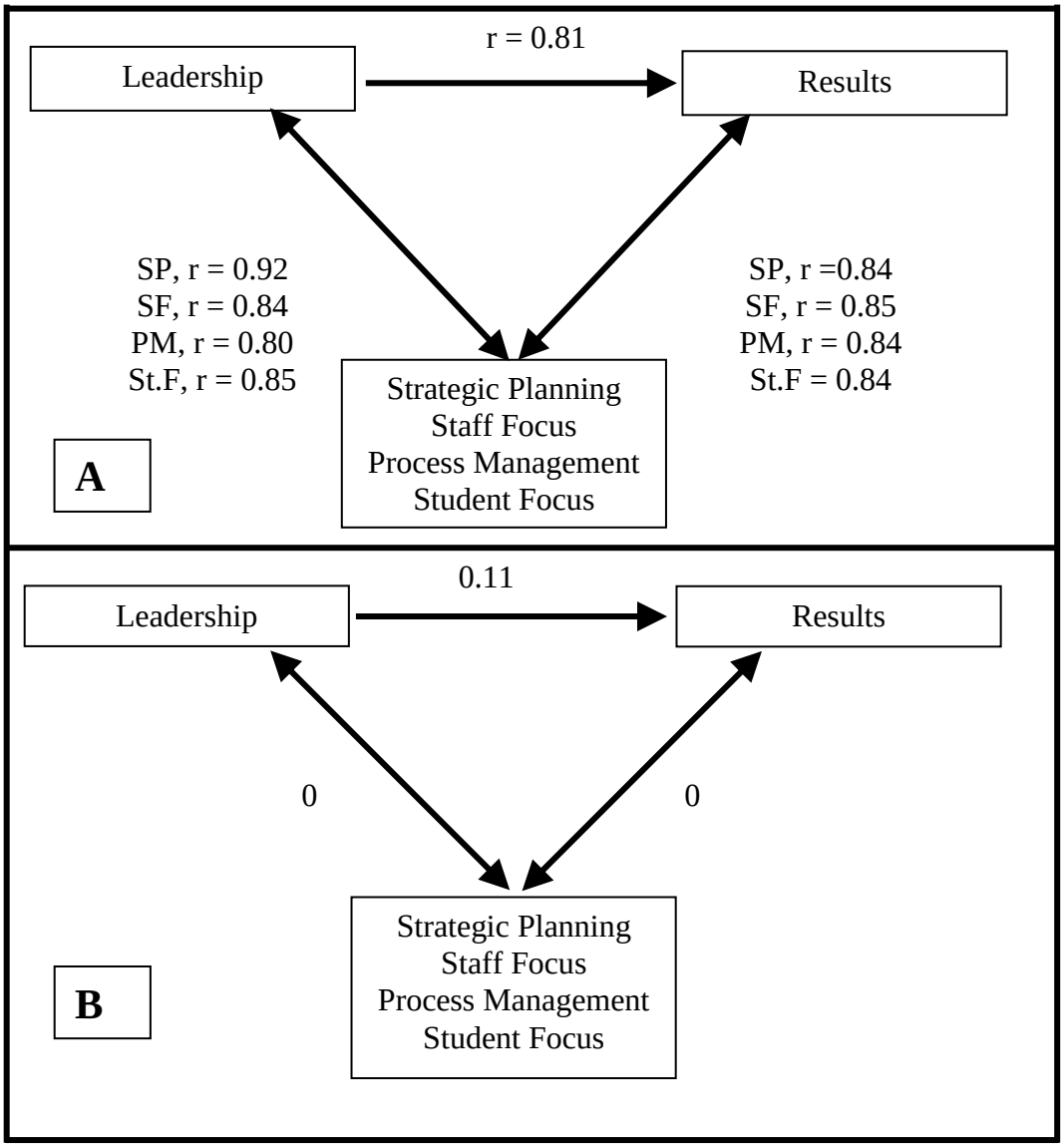
Table 7.19. Partial Correlation between Leadership and Results through Strategic Planning, Process Management, Staff Focus and Student Focus

Control Variables		**Leadership**	**Results**
Strategic Planning, Staff Focus, Process Management and Student Focus	Correlation		0.11
	Significance		0.12
	Correlation	0.11	
	Significance	0.12	

The partial correlation between Leadership and Results controlling for Strategic Planning, Staff Focus, Process Management and Student Focus is 0.11. This result is greatly significant due to the fact that the four control variables are playing an essential role in strengthening the relationship between Leadership and Results. This indicates that the relationship between Leadership and Results is highly influenced

through the control variables, Strategic Planning, Staff Focus, Process Management, and Student Focus, as illustrated in Figure 7.15 A and B.

Figure 7.15. A. Correlation between Leadership (LP) Results (RS), as mediated by Strategic Planning (SP), Staff Focus (SF), Process Management (PM) and Student Focus (St.F) (r = correlation coefficient)
Figure 7.15. B. Partial correlation between Leadership and Results.



7.4.4 Hypotheses Related to the Organisational Culture

As indicated in Chapter Four (Section 4.5), a relationship between quality and organisational culture has been identified in the literature. In order to implement quality management programmes successfully, organisation's strong culture should be

moulded to the quality method or the quality programme needs must be moulded to the organisation's culture (Klein et al., 1995). Vettori et al. (2007) have recently indicated that quality is profoundly connected to an organisation's culture, and concluded that quality concept provides a framework for institutional discernments and actions.

There is one hypothesis under this heading:

$H_{4.1}$: *There is a relationship between 'Organisational Culture' and 'Leadership', 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'.*

Test of $H_{4.1}$: There is a relationship between 'Organisational Culture' and 'Leadership', 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'.

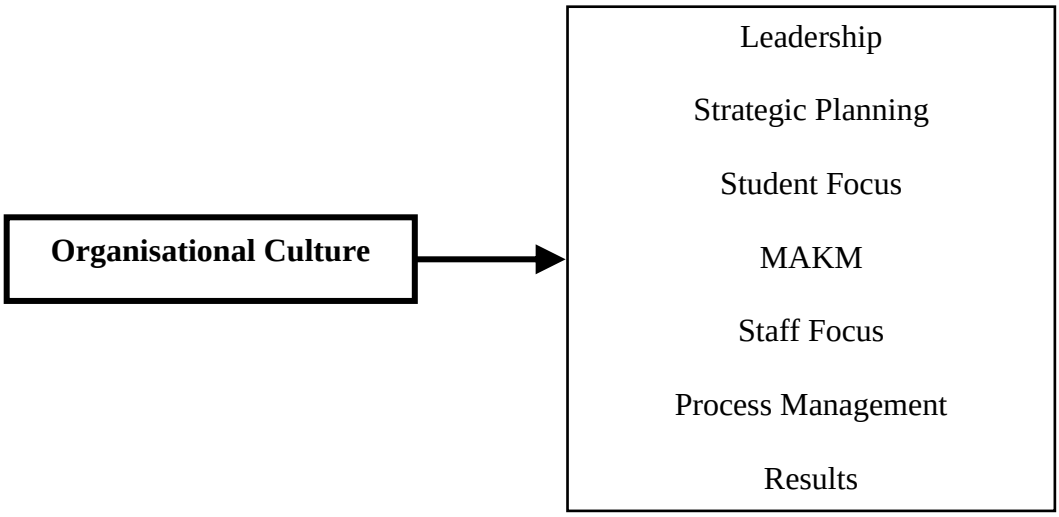
This hypothesis addresses the relationship between Organisational Culture and Leadership, Strategic Planning, Student Focus, MAKM, Staff Focus, Process Management, and Results. Table 7.20 illustrates this direct relationship between organisational culture and the seven Baldrige Criteria.

Table 7.20. Correlation between Organisational Culture and the seven MBNQA Criteria

	Organisational Culture		
	R	**p**	**n**
Leadership	0.77	0.000	213
Strategic Planning	0.75	0.000	213
Student Focus	0.78	0.000	213
MAKM	0.76	0.000	213
Staff Focus	0.82	0.000	213
Process Management	0.80	0.000	213
Results	0.86	0.000	213

Figure 7.16 illustrates the relationship between Organisational Culture and the seven Barldrige Criteria. Figure 7.16 shows that Organisational Culture influences these seven criteria: leadership, Strategic Planning, Student Focus, MAKM, Staff Focus, Process Management, and Results.

Figure 7.16. The relationship between Organisational Culture and Leadership, Strategic Planning, Student Focus, MAKM, Staff Focus, Process Management, and Results.



Organisational culture has been defined differently by different authors (Chapter Four, Section 4.5). One of these definitions is that, as adopted by Rollinson et al. (1998, p. 532), which states that culture is "*a pattern of basic assumptions - invented, discovered or developed by a given group as it learns to cope with its problems of external adaptation and internal integration - that has worked well enough to be considered valuable and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems.*" At present, the most widely accepted definition of culture is that provided by Schein (1997), and several authors have adapted his definition (see for example, Rollinson et al., 1998, p. 532, Johnson et al., 2005, p. 196). Schein (1997, p. 6) defines culture as the "*basic* assumptions *and* beliefs *that are a basic taken-for-granted fashion an organisation's view of itself in its environment*."

Organisational Culture influences the whole system and actions of the Leadership. The main issue is that Organisational Culture influences Leadership in particular, which is the driving force in the organisation, and Leadership influences the remaining six criteria; hence, through its influence on the Leadership, organisational culture influences all other criteria.

To sum up, it can be argued that the HCT organisational culture strongly influences the seven Baldrige Criteria and is strongly correlated with each one of these seven criteria. Organisational culture also significantly influenced the HCT's systems and outcomes.

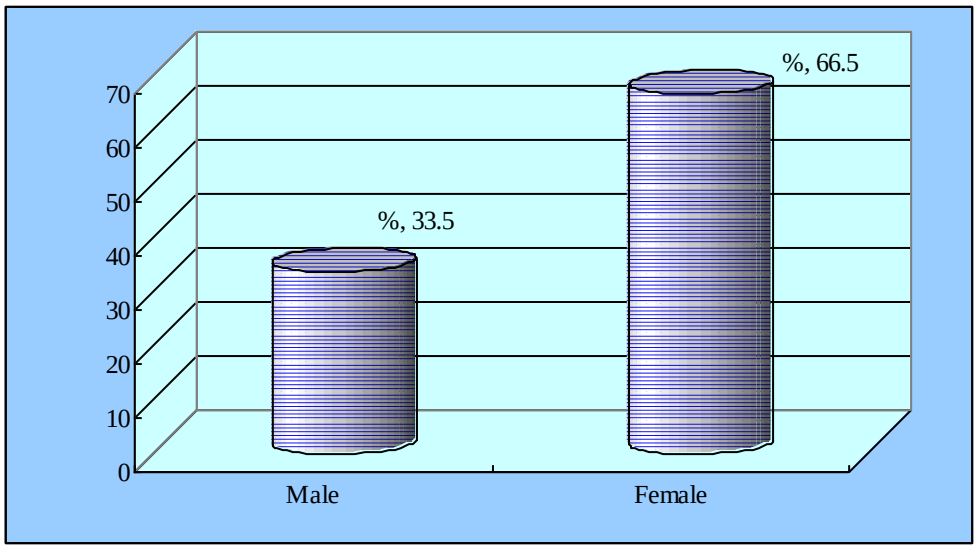
PART TWO: QUANTITATIVE DATA COLLECTED FROM HCT STUDENTS

7.5 PERSONAL AND ORGANISATIONAL INFORMATION

Six Hundred and seventy-three students responded to the electronically distributed questionnaires. Their demographic and organisational characteristics are explained in this section.

The distribution of responding students according to their gender indicates that one-third of respondents were males; and two-thirds were females, as illustrated in Figure 7.17.

Figure 7.17. Distribution of respondent students, according to gender



Half of the respondent students were attending Higher Diploma courses, followed by students attending Diploma courses (179, 26.6% of the sample), and students attending the B.Sc. courses (123, 18.2% of the sample), as Figure 7.18 shows.

Half of the respondent students were between 20 and 25 year old, and almost one third of them were younger than 20 year old (217, 32.2% of the sample). A minority of students were either 26-20 year old, or older than 30 years, as Figure 7.19 depicts.

Figure 7.18. Distribution of respondent students, according to courses attended

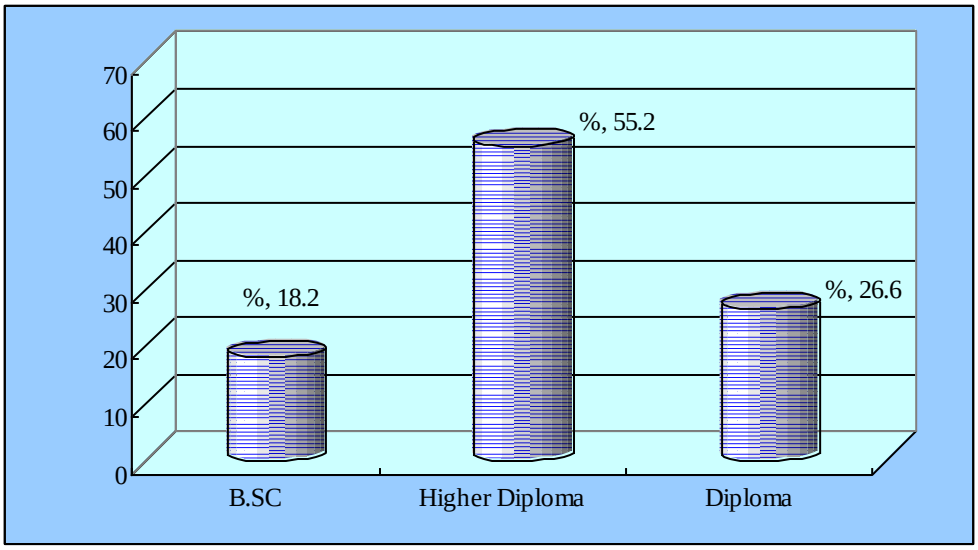
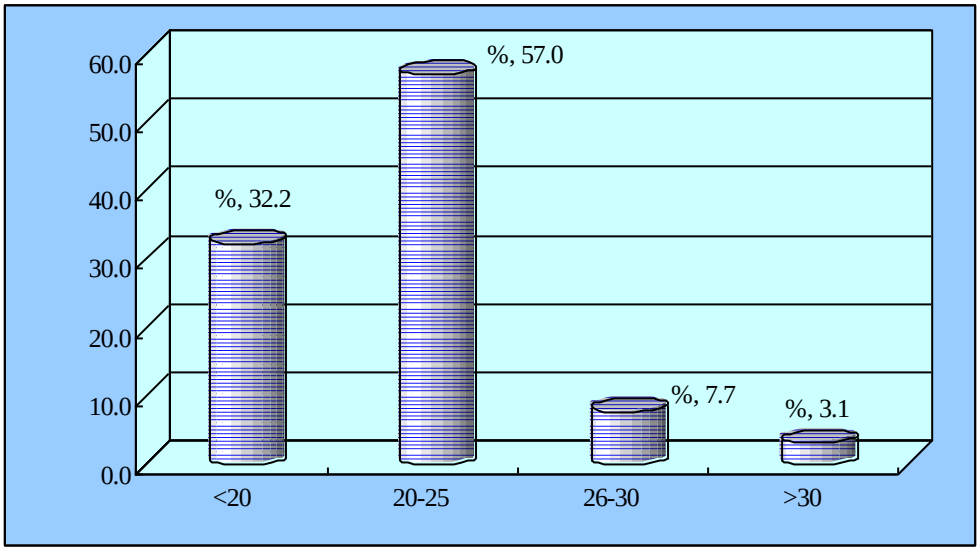


Figure 7.19. Distribution of respondent students, according to age



7.6 RESPONSES TO QUESTIONNAIRE ITEMS

Students were asked to respond to 21 items. These items are listed in the students' questionnaire (Appendix III). Responses in the questionnaire are rated between 1 and 9, and classified as follows: '1-3, Lower than my desired service level'; '4-6, Same as my desired service level', and 7-9, higher than my desired service level. A total of 673 students responded to the questionnaire items.

7.6.1 DESCRIPTIVE STATISTICS

A descriptive analysis of the 21 questions of the SERVQUAL questionnaire and the importance of the dimensions tested provides a closer insight to the analysis. Table 7.21 below reflects descriptive statistics of all items generated with ANOVA (Analysis of Variance). The minimum, maximum, mean and standard deviation of the five SERVQUAL items are listed in Table 7.22

Table 7.21. Descriptive statistics of all 21 SERVQUAL questions (N = 673)
(Key: R=Reliability, A=Assurance, RS=Responsiveness, T=Tangibles, F-Empathy)

Q.	Dim.	**Question Item**	**Mean**	**Std. Deviation**
1	R	My college provides services as promised	5.76	2.56
2	R	My college's dependability in handling students' problems	5.49	2.56
3	R	My college performs services right the first time	5.54	2.54
4	R	My college provides services at the promised time	5.72	2.53
5	RS	My college Keep students informed about when services will be performed	6.21	2.57
6	RS	My college provides prompt services to students	5.88	2.42
7	RS	My college is willing to help students	5.91	2.62
8	RS	My college is ready to respond to students' requests	5.53	2.52
9	A	My college staff instil confidence in students	5.93	2.55
10	A	My college makes students feel safe in their dealings	6.08	2.56
11	A	My college staff are consistently courteous	6.01	2.38
12	A	My college staff have the knowledge to answer students' questions	6.28	2.46
13	E	My college gives students individual attention	5.49	2.53
14	E	My college staff deal with students in a caring fashion	5.76	2.49
15	E	My college has the students' best interest at heart	5.53	2.60
16	E	My college staff understand the needs of students	6.59	2.55
17	E	My college provides convenient attendance hours	5.64	2.62
18	T	My college has modern equipment	6.70	2.53
19	T	My college has visually appealing physical facilities	6.17	2.47
20	T	My college staff have a neat, professional appearance	6.31	2.48
21	T	My college has visually appealing materials associated with the service	6.29	2.46

Table 7.22. Minimum, maximum, mean and standard deviation of the five SERVQUAL categories

Variable	No.	Min.	Max.	Mean	Standard Deviation
Reliability	673	4.0	36.0	22.5	9.4
Responsiveness	673	4.0	36.0	23.5	9.3
Assurance	673	4.0	36.0	24.3	9.2
Empathy	673	5.0	45.0	28.5	11.5
Tangibles	673	4.0	36.0	25.5	9.1

Data provided in Table 7.21 indicate that all 21 questions were assessed with more than 5 on the 9-point Lickert scale which indicates above average expectations of all service dimensions.

The mean and standard deviation figures in Table 7.22 clearly indicate the high satisfaction of students with the five SERVQUAL categories. The high mean values (all leaning towards the maximum value calculated) indicate that the majority of respondent students have chosen 'higher than my desired service satisfaction' options (7-9 on the questionnaire scale), or 'same as my desired service level' option (4-6 on the questionnaire scale).

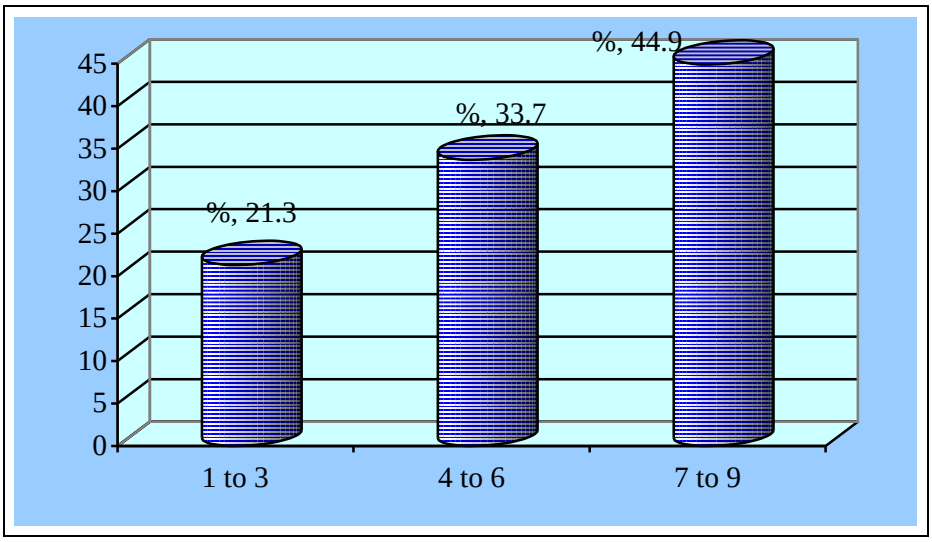
The following sections illustrate the assessment of the 21 items provided by all respondents (n = 673).

7.6.2 Assessment of Questionnaire Items

Q01. College Provides Services as Promised

When students were asked whether their college provides them with the services as it has promised, most respondent students (44.9% of the sample) indicated that provision of services as promised was higher than their desired service level. About one-third of respondents (33.7% of the sample) indicated that provision of services is the same as their desired service level. However, over one-fifth of these respondents indicated that provision of services is lower than their desired service level (Figure 7.20).

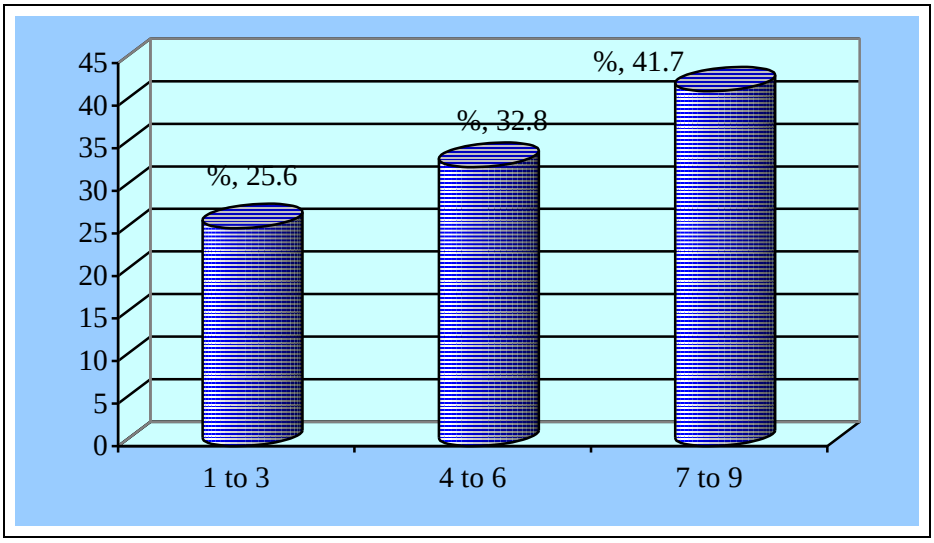
Figure 7.20. Responses to college provides services as promised (Q.1)



Q02. College's dependability in handling students' problems

When asked whether the college has dependability in handling students' problems, only around one-quarter of respondent students (25.6% of the sample) indicated that such dependability was lower than their desired service level. In contrast, 281 respondents (41.7% of the sample) and 221 respondents (32.8% of the sample) indicated that this dependability was either higher than their desired service level, or the same as their desired service level, respectively (Figure 7.21).

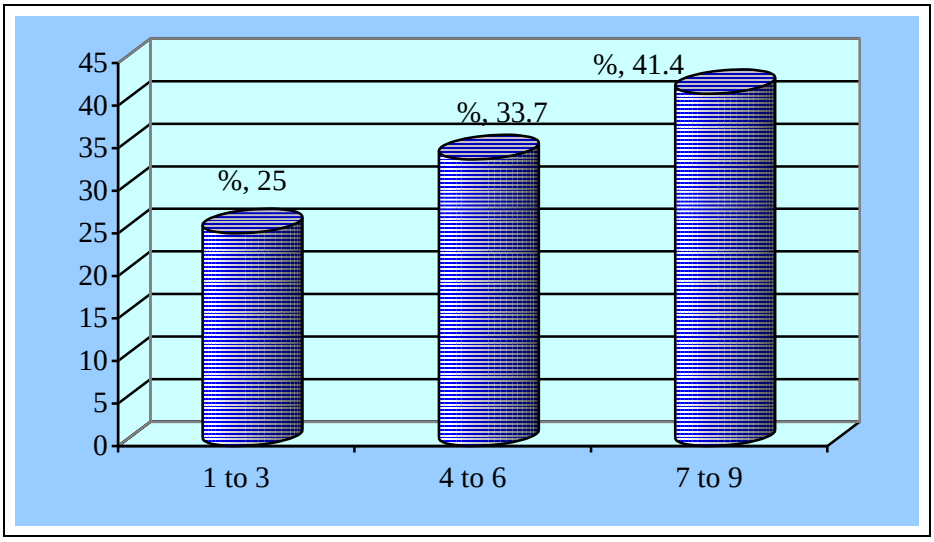
Figure 7.21. Responses to College's dependability in handling students' problems (Q.2)



Q03. College performs services right the first time

In response to whether the college performs services right the first time, less than one quarter of the respondent students (25% of the sample) indicated that this issue was lower than their desired service level. Conversely, 279 respondent students (41.4% of the sample) and 227 respondents (33.7% of the sample) indicated that this issue was either higher than their desired service level, or the same as their desired service level, respectively (Figure 7.22).

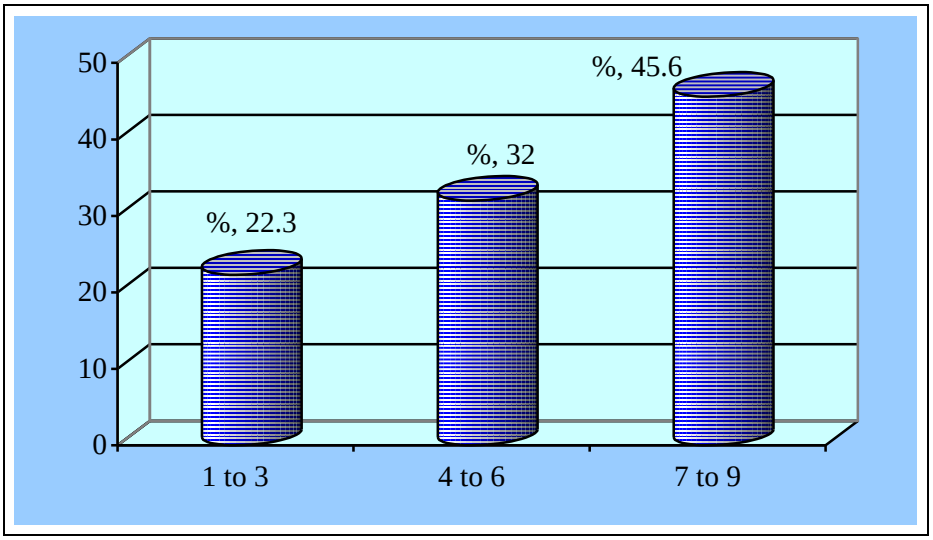
Figure 7.22. Responses to College performing services right the first time (Q.3)



Q04. College provides services at the promised time

When asked whether the college provides services at the promised time, less than one quarter of the respondent students (22.3% of the sample) indicated that this issue was lower than their desired service level. On the other hand, 308 respondent students (45.6% of the sample) and 216 respondents (32% of the sample) indicated that this issue was either higher than their desired service level, or the same as their desired service level, respectively (Figure 7.23).

Figure 7.23. Responses to College providing services at the promised time (Q4)



Q05. College keeps students informed about when services will be performed

When asked if the college keeps students informed about when services will be performed, less than one-fifth of the respondent students (18.9% of the sample) indicated that this issue was lower than their desired service level. On the other hand, over four-fifths of these respondents indicated that this issue was either higher than their desired service level (54.7% of the sample), or the same as their desired service level (26.3% of the sample) (Figure 7.24).

Q06. My college provides prompt services to students

In response to whether the college provides prompt services to students, less than one-fifth of the respondent students (18.1% of the sample) indicated that this issue was lower than their desired service level. On the other hand, over four-fifths of student respondents indicated that this issue was either higher than their desired service level (46.3% of the sample), or the same as their desired service level (35.6% of the sample) (Figure 7.25).

Figure 7.24. Responses to College keeping students informed about when services will be performed (Q.5)

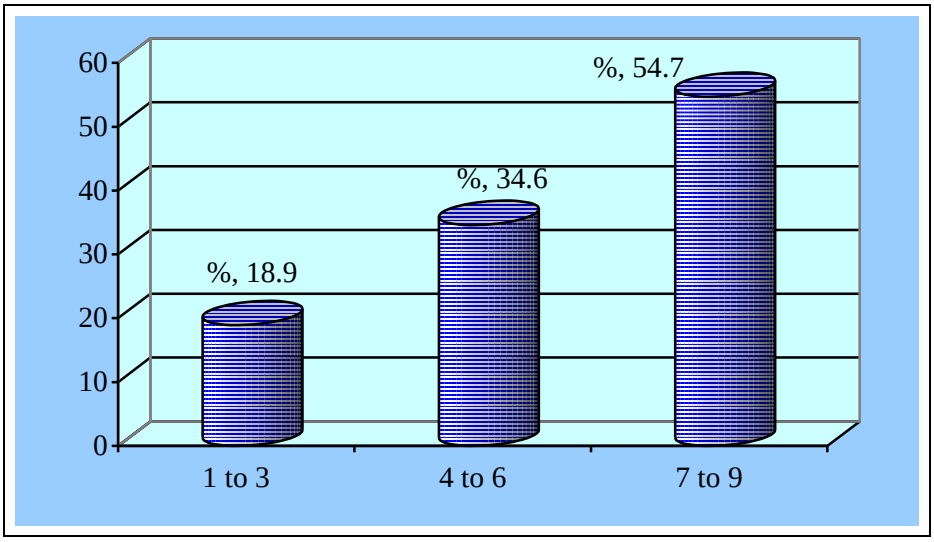
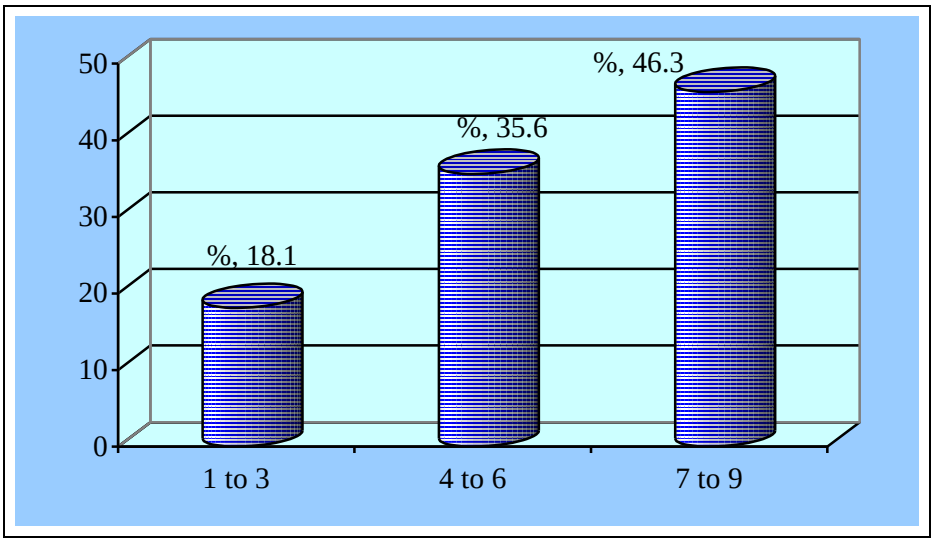


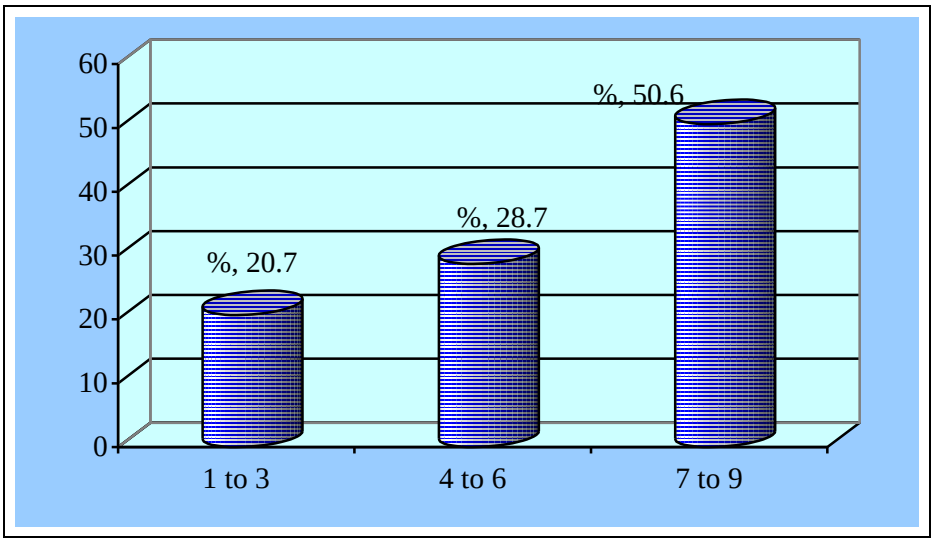
Figure 7.25. Responses to college providing prompt services to students (Q.6)



Q07. College willingness to help students

In response to whether the college is willing to help students, slightly more than one-fifth of the respondent students (20.7% of the sample) indicated that this issue was lower than their desired service level. On the other hand, slightly less than four-fifths of student respondents indicated that this issue was either higher than their desired service level (50.6% of the sample), or the same as their desired service level (28.7% of the sample) (Figure 7.26).

Figure 7.26. Responses to College willingness to help students (Q.7)



Q08. College readiness to respond to students' requests

When asked whether the college is ready to respond to students' requests, less than one-quarter of the respondent students (24% of the sample) indicated that this issue was lower than their desired service level. On the other hand, the remaining three-quarter of these respondents indicated that this issue was either higher than their desired service level (43.2% of the sample), or the same as their desired service level (32.8% of the sample) (Figure 7.27).

Q09. College staff instilling confidence in students

In response to whether the college staff instil confidence in students, one-fifth of the respondent students (20.2% of the sample) indicated that this issue was lower than their desired service level. However, the remaining four-fifths of student respondents indicated that this issue was either higher than their desired service level (48.2% of the sample), or the same as their desired service level (31.5% of the sample) (Figure 7.28).

Figure 7.27. Responses to College readiness to respond to students' requests (Q.8)

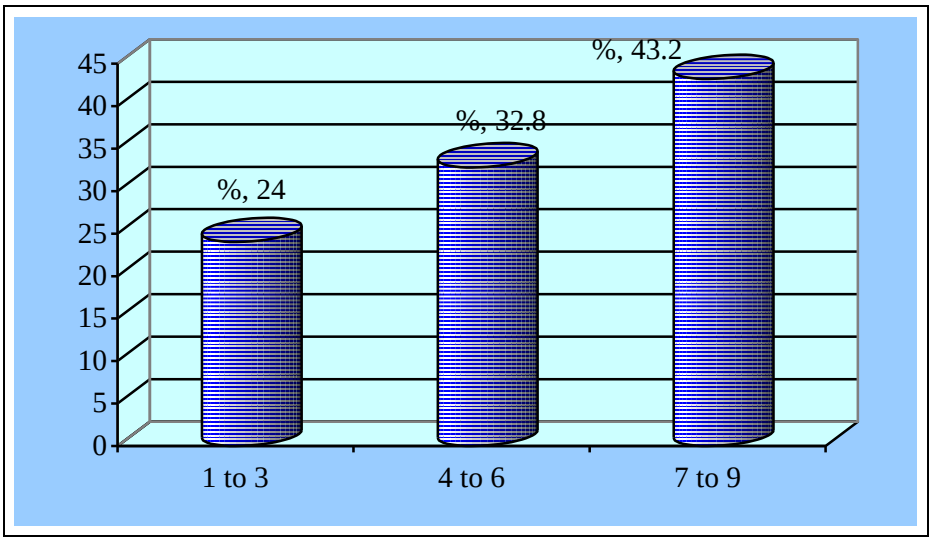
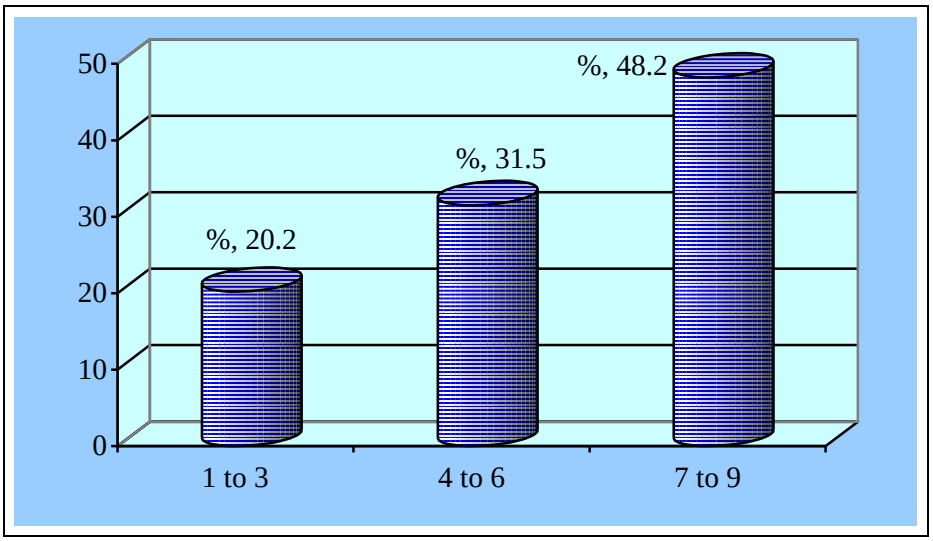


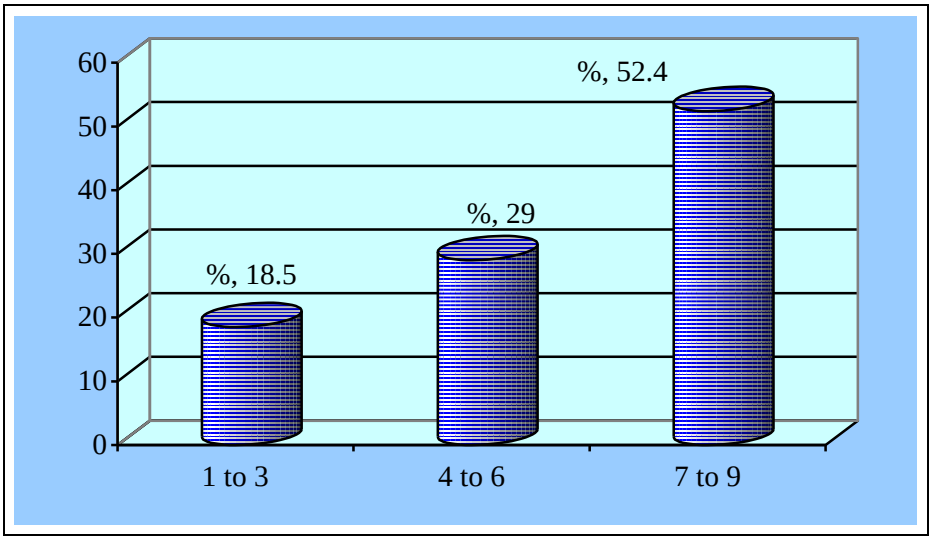
Figure 7.28. Responses to College staff instilling confidence in students (Q.9)



Q10. College making students feel safe in their dealings

In response to whether the college students feel safe in their dealings, less than one-fifth of the respondent students (18.5% of the sample) indicated that this issue was lower than their desired service level. On the other hand, over four-fifths of student respondents indicated that this issue was either higher than their desired service level (52.4% of the sample), or the same as their desired service level (29.0% of the sample) (Figure 7.29).

Figure 7.29. Responses to College staff instilling confidence in students (Q.10)



Q11. College staff are consistently courteous

When asked whether the college staff are consistently courteous, 104 respondent students (15.5% of the sample) indicated that this issue was lower than their desired service level. Conversely, the overall majority of student respondents indicated that this issue was either higher than their desired service level (48.6% of the sample), or the same as their desired service level (36.1% of the sample) (Figure 7.30).

Q12. College staff have the knowledge to answer students' questions

In response to whether the college students feel safe in their dealings, only 115 respondent students (17% of the sample) indicated that this issue was lower than their desired service level. On the other hand, over four-fifths of student respondents indicated that this issue was either higher than their desired service level (56.2% of the sample), or the same as their desired service level (26.7% of the sample) (Figure 7.31).

Figure 7.30. Responses to College staff consistently courteous (Q.11)

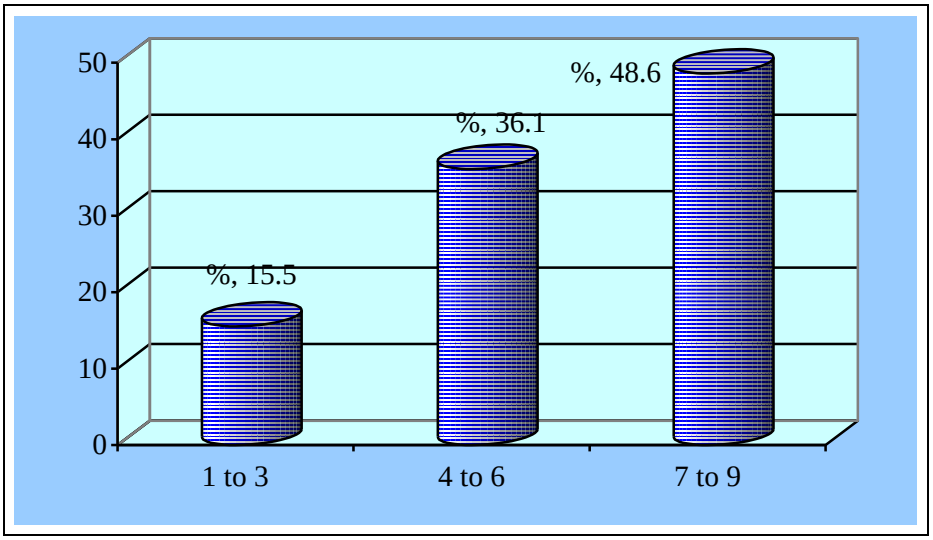
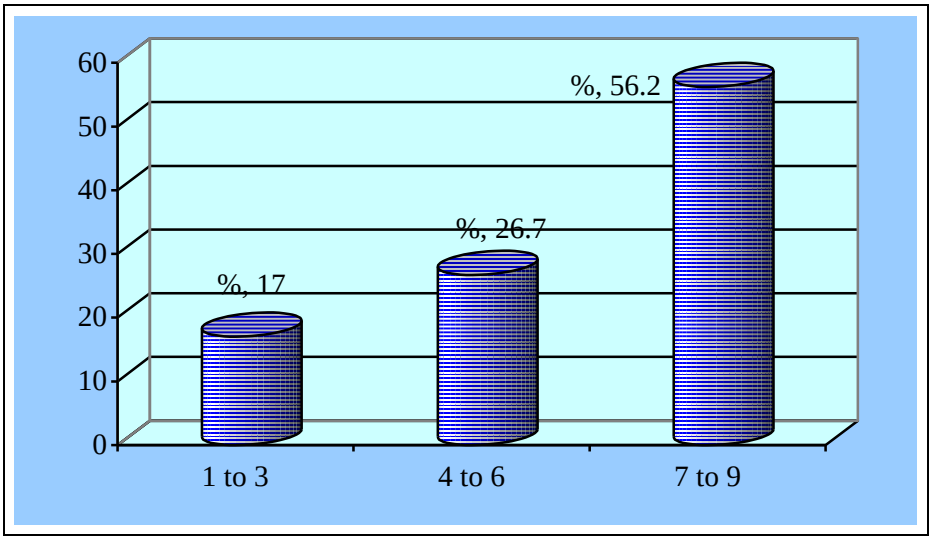


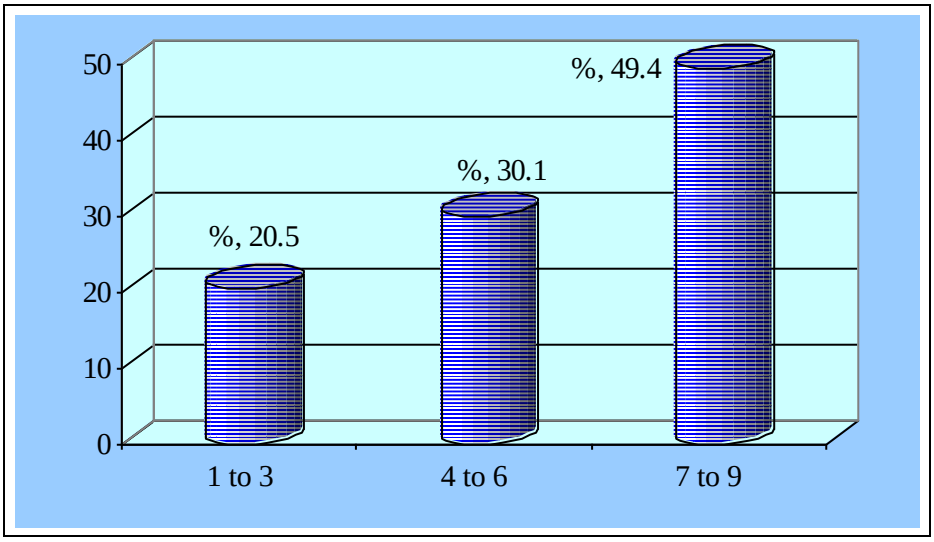
Figure 7.31. Responses to College staff consistently courteous (Q.12)



Q13. College giving students individual attention

When asked whether the college gives students individual attention, one-fifth of respondent students (20.5% of the sample) indicated that this issue was lower than their desired service level. On the contrary, four-fifths of student respondents indicated that this issue was either higher than their desired service level (49.4% of the sample), or the same as their desired service level (30.1% of the sample) (Figure 7.32).

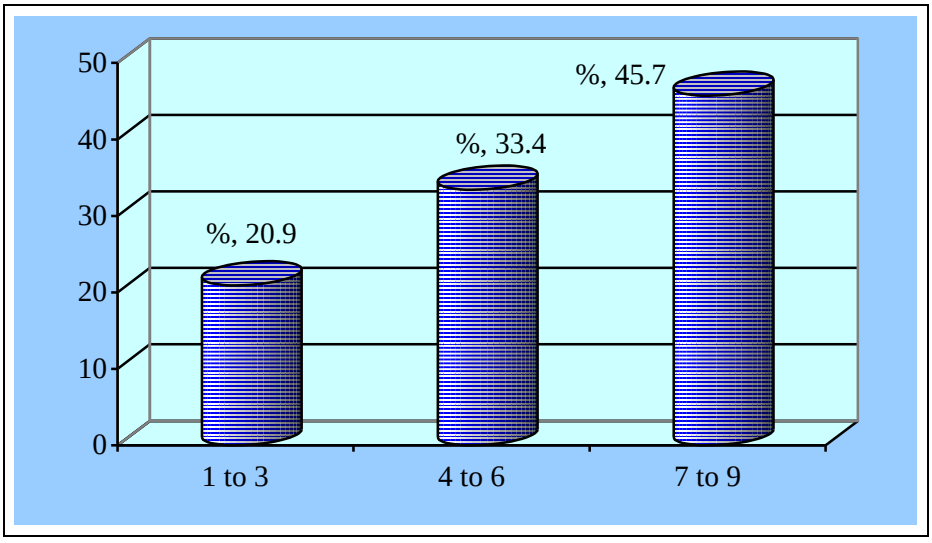
Figure 7.32. Responses to College giving students individual attention (Q.13)



Q14. College staff dealing with students in a caring fashion

In response to whether the college staff dealing with students in a caring fashion, 141 respondent students (20.9% of the sample) indicated that this issue was lower than their desired service level. However, the majority of students indicated that this issue was either higher than their desired service level (45.7% of the sample), or the same as their desired service level (33.4% of the sample) (Figure 7.33).

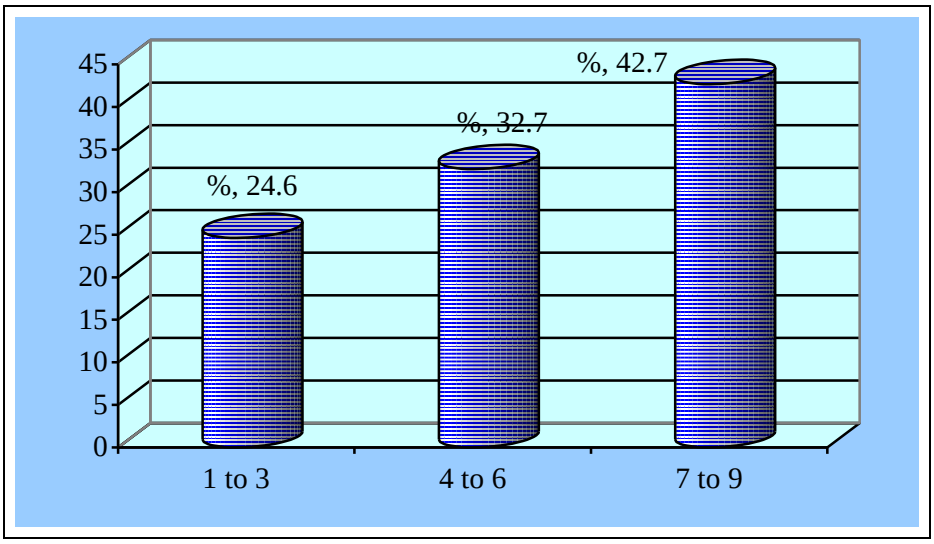
Figure 7.33. Responses to College staff dealing with students in a caring fashion (Q.14)



Q15. College has the students' best interest at heart

When asked whether the college has the students' best interest at heart, one-quarter of respondent students (24.6% of the sample) indicated that this issue was lower than their desired service level. Conversely, three-quarter of student respondents indicated that this issue was either higher than their desired service level (42.7% of the sample), or the same as their desired service level (32.7% of the sample) (Figure 7.34).

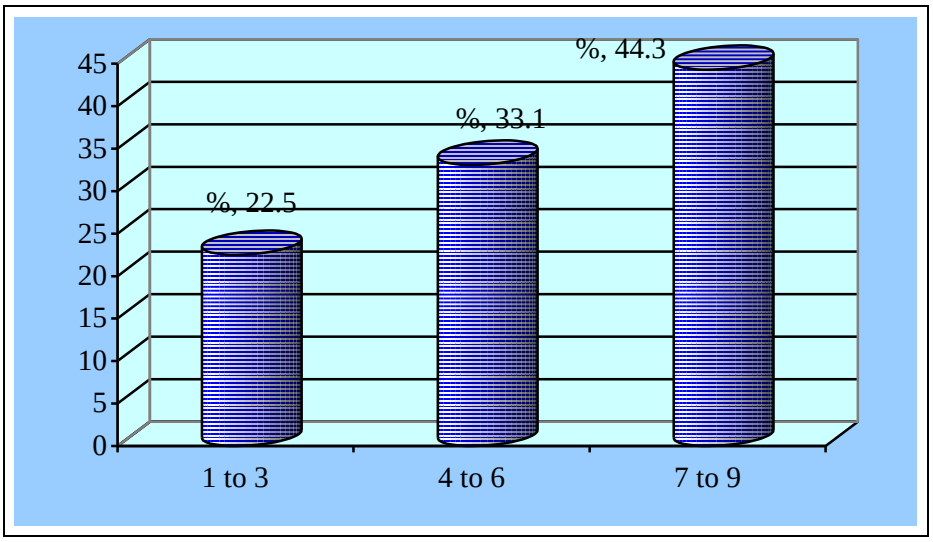
Figure 7.34. Responses to College has the students' best interest at heart (Q.15)



Q16. College staff understanding the needs of students

When asked whether the college has the students' best interest at heart, less than one-quarter of respondent students (22.5% of the sample) indicated that this issue was lower than their desired service level. Conversely, three-quarter of student respondents indicated that this issue was either higher than their desired service level (44.3% of the sample), or the same as their desired service level (33.1% of the sample) (Figure 7.35).

Figure 7.35. Responses to College staff understanding the needs of students (Q.16)



Q17. College providing convenient attendance hours

In response to whether the college provides convenience attendance hours, 163 respondent students (24.2% of the sample) indicated that this issue was lower than their desired service level. However, three-quarters of students indicated that this issue was either higher than their desired service level (44.9% of the sample), or the same as their desired service level (30.9% of the sample) (Figure 7.36).

Q18. College has modern equipment

When asked whether the college has modern equipment, only 100 respondent students (14.9% of the sample) indicated that this issue was lower than their desired service level. Conversely, more than four-fifths of student respondents indicated that this issue was either higher than their desired service level (64.4% of the sample), or the same as their desired service level (20.8% of the sample) (Figure 7.37).

Figure 7.36. Responses to College providing convenient attendance hours (Q.17)

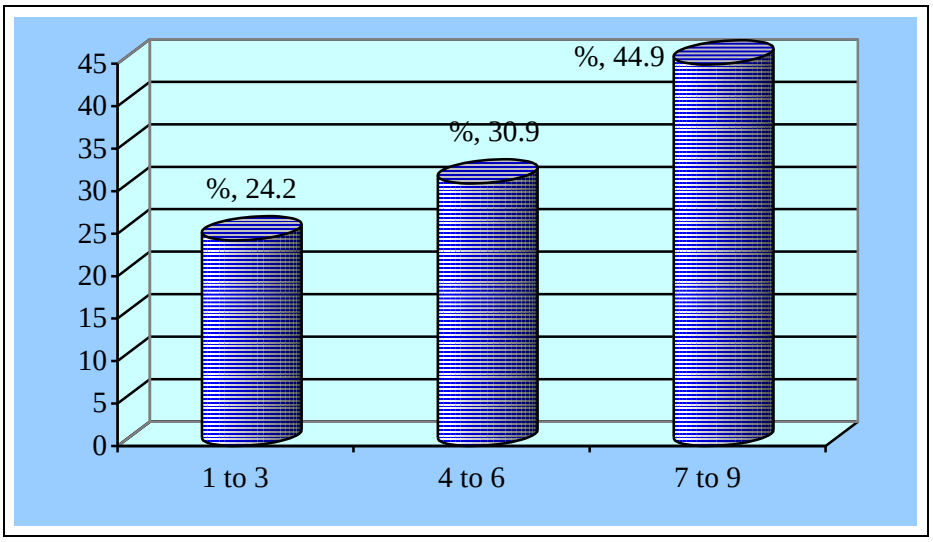
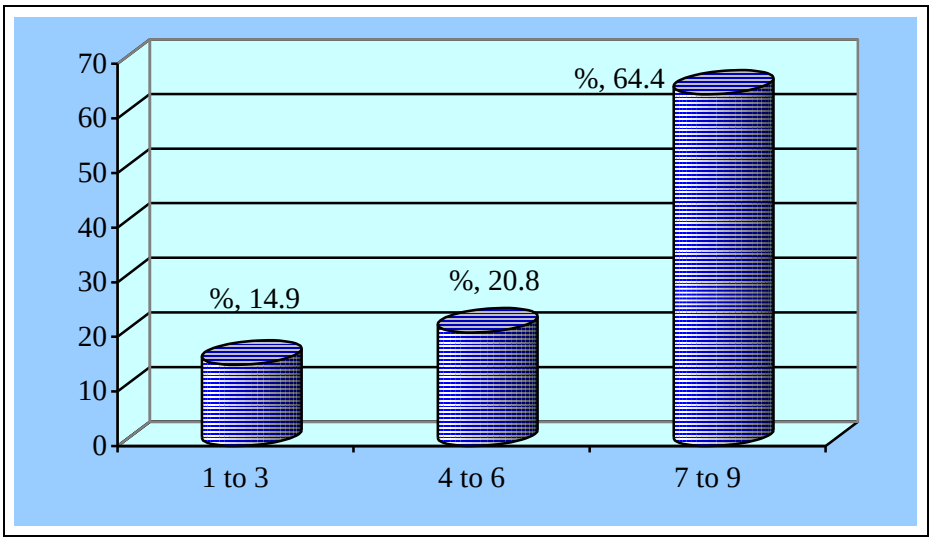


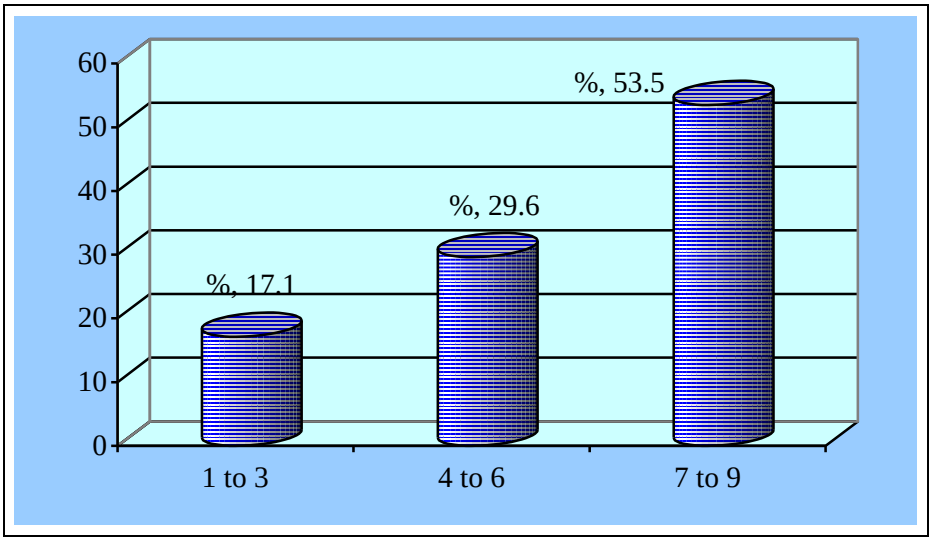
Figure 7.37. Responses to College providing convenient attendance hours (Q.18)



Q19. College having visually appealing physical facilities

When asked whether the college has visually appealing physical facilities, 115 respondent students (17.1% of the sample) indicated that this issue was lower than their desired service level. Conversely, about four-fifths of student respondents indicated that this issue was either higher than their desired service level (53.5% of the sample), or the same as their desired service level (29.6% of the sample) (Figure 7.39).

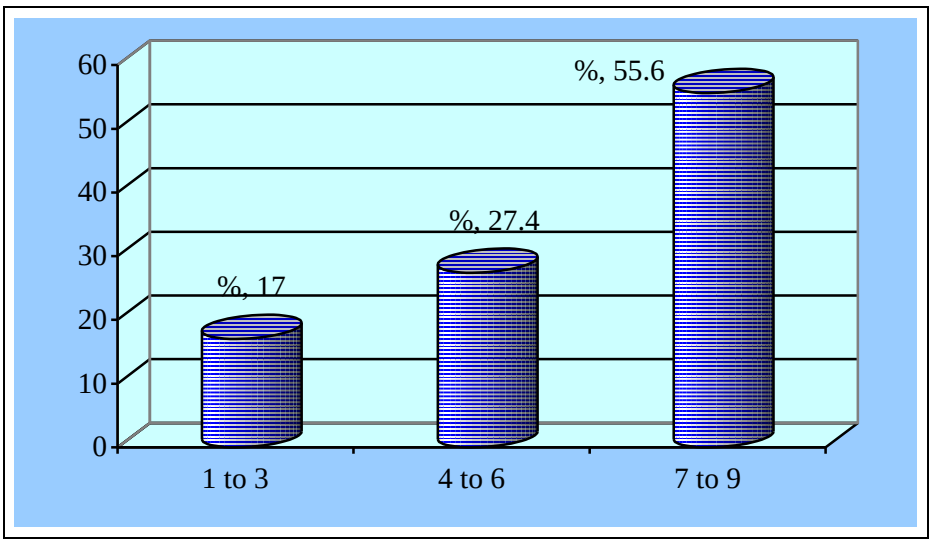
Figure 7.38. Responses to College having visually appealing physical facilities (Q.19)



Q20. College staff having a neat, professional appearance

In response to whether the college staff have a neat, professional appearance, 115 respondent students (17.0% of the sample) indicated that this issue was lower than their desired service level. On the other hand, more than fourth-fifths of students indicated that this issue was either higher than their desired service level (55.6% of the sample), or the same as their desired service level (27.4% of the sample) (Figure 7.39).

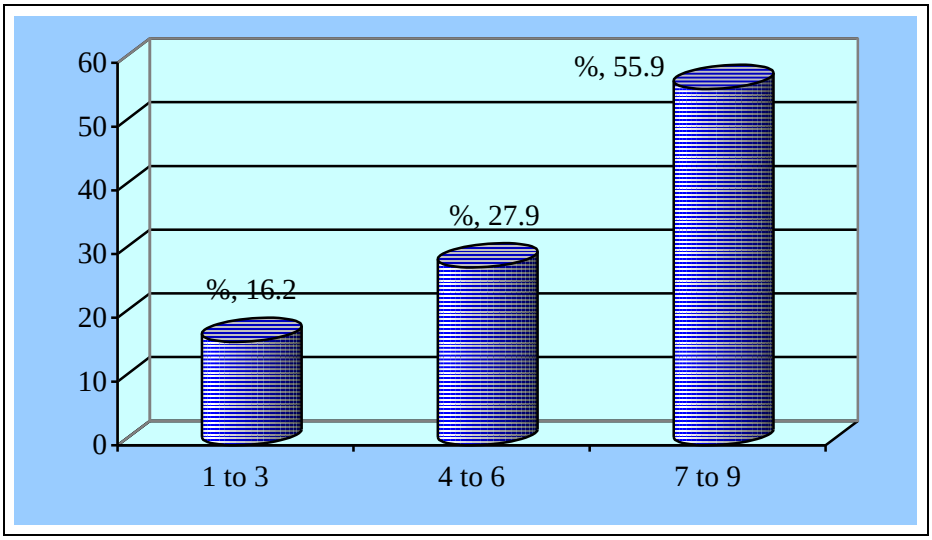
Figure 7.39. Responses to College staff having a neat, professional appearance (Q.20)



Q21. College having visually appealing materials associated with the service

Finally, when student respondents were asked whether their college has visually appealing materials associated with the service, 109 respondents (16.2% of the sample) indicated that this issue was lower than their desired service level. On the other hand, more than fourth-fifths of students indicated that this issue was either higher than their desired service level (55.9% of the sample), or the same as their desired service level (27.9% of the sample) (Figure 7.40).

Figure 7.40. Responses to College having visually appealing materials associated with the service (Q.21)



7.6.3 Inferential Results between SERVQUAL Variables

7.6.3.1 Adequacy of Students' Service Quality

H_5. Students' Service Quality is adequate.

The ANOVA test of the five SERVQUAL dimensions with regard to reliability, responsiveness, and empathy, and both between groups and within groups did not show any significant differences, except for Tangibles dimension where the differences between groups and within groups were significant at a level of 0.00 (Table 7.22). This indicates that students' service quality is not adequate; hence, H_5 is only partially accepted.

Table 7.23. ANOVA test analysis of students' service quality acceptance between groups and within groups

		F	Sig.
Reliability	**Between Groups** **Within Groups**	0.957	0.384
Responsiveness	**Between Groups** **Within Groups**	0.992	0.371
Assurance	**Between Groups** **Within Groups**	1.365	0.256
Empathy	**Between Groups** **Within Groups**	0.313	0.731
Tangibles	**Between Groups** **Within Groups**	10.006	0.000

7.6.3.2 Students' Service Quality According to Age

H_6. Service Quality of students is dependent on age.

With regard to age of respondents, F test' did not show any significant difference between students less than 20 year old and those between 20 and 25 year old. However, with regard to students under 20 year old and those between 26 and 30 year old, the 't-test' indicates a significant difference between the two age groups concerning assurance ($p>0.05$) (Table 7.24). Hence, H_6 is only partially accepted.

Table 7.24. ANOVA test analysis of students' service quality between groups and within groups according to age

		F	Sig.
Reliability	**Between Groups** **Within Groups**	2.377	0.07
Responsiveness	**Between Groups** **Within Groups**	2.369	0.07
Assurance	**Between Groups** **Within Groups**	2.729	0.04
Empathy	**Between Groups** **Within Groups**	1.470	0.22
Tangibles	**Between Groups** **Within Groups**	1.561	0.20

In terms of students between 20 and 25 year old, and those between 26 and 30 year old, the 't-test' indicates a significant difference between the two groups in terms of all SERVQUAL criteria, except for Empathy and Tangible criteria, where the difference is not significant, possibly due to the fact that these students are mature and perceive Empathy and Tangibles equally (Table 7.25). Hence, H_6 is partially accepted.

Table 7.25. 't' test analysis of students' service quality between groups and within groups according to age

	T	Sig.
Reliability	2.174	0.031
Responsiveness	2.326	0.021
Assurance	2.427	0.016
Empathy	1.654	0.099
Tangibles	0.149	0.882

7.6.3.3 Students' Service Quality According to Degree Studied

H_7. Service Quality of students is dependent on degree studied.

With regard to degree studied for (Bachelor Degree and Diploma), there is only significant differences regarding 'tangibles' category (t-test=3.716; p>0.0001). This indicates that students studying for Bachelor degree are more mature than students preparing for their diplomas who are much younger than those preparing to their Bachelor degree; hence, Bachelor degree students are more aware of the SERVQUAL Tangibles criteria.

With regard to degree studied for (Higher Diploma and Diploma), there is only significant differences regarding 'Tangibles' category (t-test=3.865, p>0.0001). This indicates that students studying for Higher Diploma degree are more mature than students preparing for their diplomas who are much younger than those preparing to their Higher Diploma degree; hence, the latter are more aware of the SERVQUAL Tangibles criteria. Hence, H_7 is partially accepted.

7.6.3.4 STUDENTS' SQ ACCORDING TO GENDER

H_8. Service Quality of students is dependent on gender.

In terms of gender, the 't-test' did not show any significant relationship between males and females concerning all five SERVQUAL categories. Hence, H_8 is not accepted.

Discussion of the quantitative results is undertaken in the following chapter (Chapter Eight). The content analysis of the HCT's Program Quality Assurance (PQA) and findings of the qualitative survey, using semi-structured interviews with HCT managers are presented in the Chapter Six. A general discussion of the research findings, research conclusions and recommendations presented in Chapter Nine.

CHAPTER EIGHT

DISCUSSION OF QUANTITATIVE RESULTS

8.1 Introduction

Higher education in the UAE has changed considerably during the past decade or so, with the establishment of many more universities and colleges (both public- and private sector universities). The competition has increased among such establishments and attracting and retaining students has intensified in recent years. Higher education institutions in the UAE can be viewed as competitors. This has led to growing pressures on each higher education institution in the UAE to provide high quality courses so as to obtain a constant supply of students. However, being a public sector higher education institution, the HCT do no experience such competition as it is funded by the federal government and its courses are of a high quality do not concern themselves with obtaining constant supply of students and education is free for all UAE citizens in all levels of education. The evidence is that the numbers of students have increased constantly over the years since their foundation.

This chapter discusses the main findings of the quantitative study from the HCT staff questionnaire; based on the seven categories of MBNQA framework: Leadership, Strategic Management, Student Focus, Measurement, Analysis, and Knowledge Management (MAKM), Staff Focus, Process Management, and Results; in addition to an eighth category, that is, organisational culture. This chapter consists of two parts. In Part One, quantitative data collected from the HCT staff will be discussed. Part Two discusses the quantitative data collected from HCT students.

PART ONE: QUANTITATIVE DATA COLLECTED FROM HCT STAFF

8.2 Main Findings from the HCT Staff Survey

This part of this chapter discusses the main results from the HCT staff questionnaire survey using the MBNQA framework.

8.2.1 $H_{1.1}$ 'Strategic Planning' is related to 'Leadership' and 'MAKM'

Statistical analysis also revealed that a significant correlation between Leadership, MAKM and Strategic Planning, and that Leadership directly influences Strategic Planning. Pannirsalvam and Ferguson (2001) argue that an organisation's quality management procedures and performance, internally and externally, depends much on the infrastructure built to support its quality management process. The MBNQA criteria signify leadership as the driving force which affects all other components of quality management (Meyer and Collier, 2001; Winn and Cameron, 1998; Pannirselvum and Ferguson, 2001; Flynn and Saladin, 2001). The research findings validate this role of the leadership as highlighted by the MBNQA criteria. The relationship between Strategic planning, Leadership and MAKM indicates a significant direct effect of leadership on strategic planning and the direct effect of MAKM on Strategic Planning. Meyer and Collier (2001) also report the causal influence of leadership on each of the System categories, that is, Strategic Planning, Staff Focus, Process Management and MAKM [as well as on the Results], concluding that leadership is an overall driver of systems and processes in hospitals. These results clearly indicate the role of HCT Leadership is strongly affecting Strategic Planning, according to the interviewed officials, who indicated that the HCT leadership has formulated short-, mid- and long term plans, relating to staff and students, and analysis of staff and student information. HCT system is also said to benefit from feedback provided by students.

It is also evident from the HCT Key criteria, addressed in Part One, Chapter Six, that the HCT leadership is involved in consulting and planning with the industry and

businesses by providing exchanges of information between business and industry, and the HCT, to help the it identify the needs of the labour market.

The quality-driven HCT's leaders have recognised the key role of the HCT information systems in providing systems of measurement, information and data analysis (Badri et al., 2006). MAKM is vital to effective planning and execution of the plans (Pannirselvum and Ferguson, 2001). This is in support of the findings of the present study. To this effect, $H_{1.1}$ (*'Strategic Planning' is related to 'Leadership' and 'MAKM'*) is accepted.

Leadership is a very important driver in quality assurance programmes, and without the involvement and commitment of senior leaders, the quality management journey becomes difficult and at times impossible (Vora, 2002). Recently, Badri et al. (2006) have indicated that leadership was the most important enabler for achieving educational performance excellence. Study findings reported in Chapter Seven indicate that the HCT leadership has a quality interest as well as an understanding of the significance of quality. This is in agreement with the findings reported in the relevant literature (Michael et al., 2000; Buch and Rivers, 2001; Walters, 2001). The literature also indicates that the promotion of organisational commitment is accomplished as a result of senior management commitment (Buch and Rivers, 2002; Everett, 2002; Baidoun, 2004). According to Baidoun (2004), commitment of top management is also emphasised as a critical factor by a number of empirical studies, including those of Ahire (1996), Ahire et al. (1996), Ali (1997), Dayton (2001), Flyn et al. (1994), Lau and Idris (2001), Li et al. (2001), Pun (2001), Ramirez and Loney (1993), Rao et al. (1999), Saraph et al. (1989), Sureshchandar et al. (2001), Thiagarajan (1996), Zairi and Youssef (1995), and Zhang et al. (2000).

The significance of strategic planning process based on total quality has been emphasised by many quality authorities and authors (Deming, 1986; Oakland, 1993; Zairi, 1994; 1999a; James, 1996; Ahire et al., 1996; Martinez-Lorente et al., 1998; Dayton, 2001; Sinclair and Zairi, 2001; Sureshchandar et al., 2001; Crepin, 2002; Hitchcock and Willard, 2002).

The HCT's senior leadership has developed the Colleges' visions which integrate quality values, performance expectations, and a focus on staff and students. This finding also indicates that the senior leaders have evaluated and improved leadership system, for example, the way of using their review of the HCT's performance, and staff feedback in the evaluation process.

8.2.2 $H_{1.2}$. Staff Focus' is related to 'Leadership' and 'MAKM'

As explained in Chapter Seven, staff is the most valuable resource of an organisation, given that staff implement the organisation's systems, decisions, practices and operations. Qualitative findings of the present study (Chapter Six, Part Two) indicate that leadership focuses on staff, and according to an official, this is at the heart of the HCT commitment to quality assurance to constantly improve the quality programme. Interview findings show that HCT staff and leadership participate in quality assurance reviews since the mechanism they have includes both.

Results of the present study also indicate significant correlation between Staff Focus, and Leadership and MAKM. Leadership (top management support) has a significant effect on Staff Focus (also referred to in the literature as human resources management, e.g., Flynn et al., 1995). Similar findings have been reported by Flynn et al. (1995). Furthermore, this relationship also demonstrates the significant impact of leadership on training and product quality (Adam et al., 1997). Badri et al. (2006) also showed that Leadership is an overall driver of Staff Focus (Faculty and Staff Focus) in higher education. Staff focus is also affected by MAKM. Badri et al. (2006) also reported the impact of MAKM on Staff Focus. Meyer and Collier (2001) report two important findings concerning MAKM, indicating that MAKM is a driver within-System performance, having a significant causal influence on other System categories, Strategic Planning, Human resource Development and Management (referred to in the present study as Staff Focus), and Process Management. Similar causal influences have been identified in the present study. Meyer and Collier (2001) indicate that these relationships identify information systems as critical link in the Baldrige System. The same can be said concerning the HCT. It can be argued that the statistically significant causal influence of KAKM on Staff Focus supports

Baldrige theory. A similar conclusion has been argued by Meyer and Collier (2001) concerning health care systems.

It can be concluded that Leadership plays a significant role in the HCT's Baldrige causal model, first by having a direct causal influence on the components of the Baldrige System: Strategic Planning, and Staff Focus. MAKM also influences Staff Focus. Based on this discussion, $H_{1.2}$ (*'Staff Focus' is related to 'Leadership' and 'MAKM'*) is accepted.

8.2.3 $H_{2.1}$. 'Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM'

$H_{2.2}$. The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus'

Findings show that HCT have a systematic approach in place for the practices and processes concerning how the HCT determines its core competencies and work systems and how it designs, manages, and improves its key processes for implementing such work systems to deliver student and staff value and achieve organisational success and sustainability. It also examines is the organisation's readiness for emergencies.

The quality of the management processes depends upon "*an understanding of how people learn, how they interact, and how they sustain, develop, or even destroy, a culture*" (Hodgkinson and Kelly, 2007, p. 78). These authors argue, however, that though understanding is the basis, it is also essential for well articulated methods of evaluation of the management processes involved. These methods, often referred to as quality audits or annual monitoring and review, generally involve audit trails which map the extent of coherence of the system, the links between various components, and the closure of feedback loops in the system (Hodgkinson and Kelly, 2007).

As discussed in Chapter Six, Part Two, in the HCT, there is the yearly report, which has been dealt with. Interviews revealed that the HCT leadership has not done much about the earlier quality assurance reports, except with regards to compiling data over three to four years and that a number of quality assurance programmes required

leadership to prove continuous improvement; hence, there was the need of a baseline with which to establish a three year programme for the present time, and in some cases going back for five years. Interview indicated that when top management want to use this baseline against which they can assess improvements in the quality of what they offer their students of services, programmes and qualifications that they emerge from the HCT. Interviews also the HCT leaders deal with the yearly report concerning two things; the need to look at the industry and community satisfaction with the programme, which means the HCT graduates are meeting the industry's satisfaction, which is very important; and the satisfaction of the graduates when the graduates are really feeling they have enough skills and knowledge to work in the industry.

Results clearly show that the HCT have a systematic approach in place for the practices and processes relating to performance and improvement in all staff-focused outcomes. This may suggests that the level of staff satisfaction has improved; hence, staff performance can be expected to be higher than the standard required as they are fully motivated. High morale is argued to lead into economic success (Koskela, 2002); whereas failure in the marketplace leads to low motivation (Heskett et al., 1990; Maister, 1997). This high staff satisfaction might be related to the fact that this satisfaction is regularly tested and evaluated by the HCT top management. It may be said that the effects of HCT leadership on staff outcomes are adequate to highly motivate staff and positively affect their performance. This is consistent with the relevant literature in this area (see for example, Fuller et al., 1996; Lowe et al., 1996; O'Reilly et al., 1991; Huang et al., 2005).

Study findings (Section 6.4.2) revealed significant correlations between Process Management, Strategic Planning, Staff Focus and MAKM ($H_{2.1}$. *'Process Management' is related to 'Strategic Planning', 'Staff Focus', and 'MAKM'*) and an indirect relationship between Process Management and Leadership, which is mediated by Strategic Planning and Staff Focus ($H_{2.2}$. *The relationship between 'Process Management' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus'*). It can be said that these two hypotheses are accepted.

8.2.4 $H_{2.3}$. Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'

$H_{2.4}$. The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus

Students are the external customers of the HCT, as identified in Chapter Four; hence, their satisfaction with the services and courses provided for them by their respective departments and colleges, as perceived by the HCT staff, is of utmost importance, since the satisfaction and dissatisfaction results of students and staff provide vital information for understanding students, staff, and markets.

In the Baldrige framework for education (Baldrige National Quality Program, 2008, p. 13), the organisation determines requirements, needs, expectations, and preferences of students, staff, and markets to ensure the continuing relevance of your educational programs, offerings, and services; to develop opportunities for new programmes, offerings, and services; and to create an overall climate conducive to learning and development for all students.

Research findings (Chapter Seven, Section 7.3.5) indicate that the HCT have good systematic approach in position for the practices and processes as to building relationships to attract, satisfy, and retain students and to increase student loyalty, as well as how HCT determines student and staff satisfaction and dissatisfaction, though in early stages of implementing such practices and processes.

In order to achieve customer satisfaction, the literature (for example, Oakland, 2000) highlights the significance of managing the internal-supplier relationship as the first step to support the process management. Baidoun (2003) argues that through a process of translating the customer-supplier chain at all levels, better focus can be attained and in due course all work undertaken will be of value, as indicated by Zairi (2000); McAdam and Kelly (2002) and Feigenbaum (2002).

Student Focus is evident in the key principles of the HCT's PQA, in terms of student learning and success, student performance in assessment and progression through the

programme (KC4), and student and graduate satisfaction with teaching, learning and assessment (KC5).

Leadership focuses on Strategic Planning which serves students largely, and in the meantime staff always do their best to deliver their courses to the students in a professional way to help them reach graduate outcomes and meet industry and business requirements. Student Focus is also evident in interviews with HCT officials. Interviewees argue that student learning is the only thing they do, and that students are encouraged to work with the industry on projects during their study. Interviewees also indicate that the focus is to make sure that students really learn and the teachers are taking this commitment to meet students' preparation.

Statistical analysis showed that Student Focus is significantly correlated with Strategic Planning, Staff Focus and MAKM ($H_{2.3}$. *'Student Focus' is related to 'Strategic Planning', 'Staff Focus' and 'MAKM'*) and an indirect relationship between Student Focus and Leadership which is mediated by Strategic Planning and Staff Focus ($H_{2.4}$. *The relationship between 'Student Focus' and 'Leadership' is mediated by 'Strategic Planning' and 'Staff Focus'*). Accordingly, these two hypotheses are accepted.

8.2.5 $H_{3.1}$: 'Results' is related to 'Process Management' and 'Student Focus'. $H_{3.2}$: The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'Staff Focus' and 'Student Focus'

The literature indicates that Results positively affect Student Focus as well as Process Management (Badri et al., 2006). Meyer and Collier (2001) found that Results has a positive causal influence on Student Focus, and argued that this Results "*relationship supports Baldrige theory that improved internal capabilities and performance results in improved external performance*" (p. 416).

Interviewed officials refer to the relationship between Results and Student Focus, indicating that they have clear goals for the development of laptop services and support across the college for all students, and also goals for updating and upgrading

software programmes for students. They also referred to the 'learning outcomes', a programme offered to graduates and students in their final year.

Statistical analysis showed a significant correlations between Results, Process Management and Student Focus (*$H_{3.1}$: 'Results' is related to 'Process Management' and 'Student Focus'*) and an indirect relationship between Results and Leadership, as mediated by Strategic Planning, Process Management, Staff Focus and Student Focus (*$H_{3.2}$: The relationship between 'Results' and 'Leadership' is mediated by 'Strategic Planning' 'Process Management', 'Staff Focus' and 'Student Focus'*. These findings support this hypothesis that Results is related to Process Management and Student Focus. Accordingly, these two hypotheses are accepted.

8.2.6 $H_{4.1}$: There is a relationship between 'Organisational Culture' and 'Leadership', 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'

Organisational Culture has been added, as indicated in Chapter Four and Chapter Seven, to the existing seven dimensions of the Malcolm Baldrige Education Criteria for Performance Excellence by the author, as it was anticipated that HCT culture will have an impact on the seven Criteria. The impact of organisational culture on the application of quality systems has been investigated in the literature (Klein et al., 1995; Calori and Sarnin, 1991; van Donk and Sanders, 1993; Saraph and Sebastian, 1993). The literature has identified a relationship between quality and organisational culture, for example, Klein et al. (1995) argue that to implement quality management programmes effectively, the organisation's culture must be moulded to the quality method or the quality programme needs to be moulded to the organisation's culture. Martins and Terblanche (2003) indicate that organisational culture seems to be a critical factor in the success of any organisation. Successful organisations are said to have the ability to absorb innovation into their cultures and management processes (Syrett and Lammiman, 1997; Tushman and O'Reilly, 1997). Tushman and O'Reilly (1997) maintain that organisational culture lies at the heart of organisation innovation. This is the case of the HCT, whose culture has been described as developmental characterised by flexibility, growth, innovation and creativity (see Denison and Spreitzer, 1991). According to Zu et al. (2006, p. 15), the developmental culture

emphasises flexibility and external orientation, and organisations with emphasis on such cultural orientation are likely to focus on growth, resource acquisition, creativity, and adaptation to the external environment. They add that the strategies employed to manage the organisation include innovation, resource acquisition, and the development of new market.

Maull et al. (2001) maintain that the significance of culture in understanding total quality management is widely supported in the literature, referring to several authors (Patten, 1992; Kim et al., 1995; Hildebrandt et al., 1991) as having encouraged the acceptance and the recognition of the organisational culture construct within quality management, in particular as a primary requirement for its successful implementation.

The Malcolm Baldrige Education Criteria for Performance Excellence is formulated within the context of American culture, which is totally different from that of the UAE's culture. The American culture, as also many Western European cultures are characterised as being individualistic, whereas the UAE's culture is collectivist culture, according to Hofstede's (1984) and Trompenaars' (1993) classification of culture. This necessitates that the Malcolm Baldrige Education Criteria for Performance Excellence must be implemented in a UAE context. This is due to the fact that for the implementation of quality programmes in the HCT, culture has two aspects: external and internal. The 'external', or the local culture of the UAE which is characterised as an Arab Moslem culture that has its impact on any quality improvement initiatives, whereas the 'internal' culture is that of the HCT's own culture as an organisation. Both aspects of culture will exert their effects concerning the success of quality programmes and quality improvement in the HCT.

This category, as indicated in Chapter Seven (Section 7.3.8), examines how HCT organisational culture influences flexible implementation of the quality programmes, encourages involvement of all staff and students in the implementation of the current quality programme, promotes innovative approaches by HCT staff, helps provide adequate information and opportunity for staff to become more creative, helps develop a holistic approaches to quality, for example, total quality management (TQM), how HCT Management actively seeks new ideas, staff have opportunities to use their skills effectively in their jobs, and how they are encouraged to find new

methods and ways of doing things. Research findings clearly illustrate that the HCT have a systematic approach in place for these practices and processes.

In order to implement quality management programmes successfully, the organisation's culture should be moulded to the quality method or the quality programme needs must be moulded to the organisation's culture (Klein et al., 1995). Vettori et al. (2007) have recently indicated that quality is profoundly connected to an organisation's culture, and concluded that quality concept provides a framework for institutional discernments and actions.

One of the contributions made by this study to knowledge (Chapter One, Section 1.5) is that using the seven MBNQA criteria in addition to the eighth added criterion, that is, organisational culture to assess the performance of the HCT. The inclusion of the organisational culture construct is to adapt the MBNQA criteria to the HCT culture; hence, the issue is to develop a quality programme that can be most successfully implemented within the context of the HCT, and possibly within the context of quality assurance in the UAE higher education as a whole.

Interviews undertaken with the HCT management clearly indicated that culture promotes proper implementation of quality programmes, and the culture in the HCT is about quality, and culture also focuses on quality. Interview findings also indicate that the HCT culture encourages involvement of all internal stakeholders in implementing current quality programme, the HCT organisational culture helps provide adequate information and opportunity for staff to become more familiar with the organisational change process and also helps implement holistic quality approaches such as total quality management (TQM).

Statistical analysis also reveals that there is a relationship between Organisational Culture and the MBNQA seven Criteria (*$H_{4.1}$: There is a relationship between 'Organisational Culture' and 'Leadership', 'Strategic Planning', 'Student Focus', 'MAKM', 'Staff Focus', 'Process Management' and 'Results'*). Hence, this hypothesis is accepted.

PART TWO: QUANTITATIVE DATA COLLECTED FROM HCT STUDENTS

8.3 Discussion of HCT Student Survey Findings

Service quality is linked to consumer satisfaction (Duffy and Ketchand, 1998). Customer satisfaction, that is, the full meeting of an individual's expectations has been a critical concept in contemporary marketing thought and also in research associated with customer behaviour (Naser et al., 1999). Quality in higher education can basically be defined in terms of meeting the needs of the students; in other words, achieving students' satisfaction. In this context, there are those who perceive students as one of the main customers or constituents of the higher education institutions. Tam (2001) perceives students as a necessary component of higher education and the role of institutions is solely to provide the optimal favourable conditions to promote quality learning in students. Equally, there are those who do not like to perceive students as customers. Lewis and Smith (1994) are two of those who perceive students as customers. They suggest that while perceiving the campus as a customer-driven entity may be an aversion to many, one truth has been proven repeatedly: customer-driven organisations are effective as they have a cohesive emphasis of a full commitment to satisfying, even expecting the needs of the customer. The literature (e.g., Chaffee and Sherr, 1992; Lewis and Smith, 1994) point to the fact that while colleges and universities have been successful, their future success will more and more be determined by customer satisfaction.

Students have been perceived as customers of higher education as they have to pay their tuition fees (bills) for the services; that is, education, to be rendered. However, even this view is open to debate since some are content that students are not able to accurately define their needs, such as, determining the curriculum needs or the curriculum content, and do not pay the full cost of their education because parents and loans often help to subsidise the cost of education. Furthermore, not in all countries students pay fees, as is the case in the UAE, where education is free at all educational levels, except in the private sector. On the other hand, there are those who advocate the idea that students are perceived as customers. For example, Lenington (1996) argues that students are the 'customers', maintaining that a distinctive attribute of higher education is that students are both the customer and the product of the

business. In this context, if we perceive students as 'customers', then we have to meet their expectations; that is, we need to focus on customer satisfaction and its consequences. Schmidt (2002) identifies students as key stakeholders in higher education.

Five service quality dimensions for the HCT educational service provision to their students: reliability, responsiveness, assurance, empathy, and tangibles, have been studied.

In terms of the Tangible dimension, the findings imply that this dimension was the utmost concern by HCT students. The findings indicate that the majority of students involved in the questionnaire survey were satisfied with the tangibility of the HCT's provided services, especially those concerning the college having modern equipment. Having modern equipment clearly indicates that the HCT offer their students state-of-the-art instruction equipment and also high quality instruction materials. College staff having a neat professional appearance was also a main factor in students' satisfaction. Neat appearance of staff has been reported to be an important factor in customer satisfaction in other industries, such as hotel industry (Marković, 2004). Parasuraman et al. (1985) and Walbridge and Delene (1993) have indicated that clean and neat appearance of public contact personnel is one of the attributes of one of the ten determinants of service quality, that is, courtesy. College staff are continuously courteous (Q11, Assurance dimension) has been one of the main factors for HCT student satisfaction.

With regard to Assurance dimensions, findings imply that Assurance was the second utmost concern by the HCT students. Safety, courtesy and staff with knowledge to answer students' questions, i.e., staff competence were three out of four issues in students' satisfaction. Competence is another attribute of the ten determinants of service quality (Parasuraman et al., 1985; Walbridge and Delene, 1993).

Concerning empathy, the findings imply that HCT students were satisfied with the way college staff have been dealing with them. Student satisfaction with the teaching, learning and assessment is provided for in the PQA Key Criteria (KC5).

Students were also satisfied with the responsiveness dimension. The same can be said about reliability dimension. Interviewees indicated that the focus is to make sure that students really learn and the teachers are taking this commitment to meet students' preparation. One interviewee summed his views indicating that they ask students whether they are happy with what they do, and then to look at the results and management finds something that they can improve they have to do it, and as he said, 'the system is designed to do that'.

8.4 Summary

The main findings from the quantitative surveys of both staff, concerning the PQA programme implemented by the HCT, using a questionnaire based upon the MBNQA, and students, concerning service quality and student satisfaction with the quality of services provided to them by the HCT, using a SERVQUAL questionnaire were discussed in this chapter. In addition to the Baldrige's seven criteria, that is, leadership, strategic planning, student focus, Measurement, Analysis and Knowledge Management (MAKM), staff focus, process management, and results, an eighth criterion, that is, organisational culture, was added. Findings indicated that all MBNQA eight criteria used were positively and significantly correlated with each other and that HCT's organisational culture considerably influenced the outcome of the other MBNQA criteria.

With regards to student satisfaction with the services provided, the HCT students were satisfied with all the 21 items of the SERVQUAL questionnaire.

CHAPTER NINE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

9.1 Introduction

This chapter provides a summary of the main research findings, outlines recommendations for the HCT Management and the implications of the implementation of quality programmes for the HCT. Research contribution to knowledge and limitations of the present study are also highlighted and discussed in this chapter.

Staff members also hold various qualifications, ranging from higher diplomas to Ph.D. degrees. This is in conformity with credentials SACS requirements of all faculty (full and adjunct) at various programme levels applicable to the HCT, as was discussed in Chapter Seven, Part One. The majority of these respondent staff members (with B.Sc. to Ph.D. qualifications) are teaching or senior staff. Those with higher diploma qualifications and some of those holding B.Sc. qualifications can be said to have been employed as technicians or administrators.

9.2 Key Research Findings and Recommendations

This study is an important work as an addition to human knowledge concerning quality in the United Arab Emirates and its impact of educational institutions which will take it into their consideration is substantial. This is mainly due to the nature of the present study, which, as indicated in Chapter Five, is an action research; the objective of which is to answer questions in relation to investigating the effectiveness of the Program Quality Assurance (PQA), implemented by the HCT. This study also showed that the HCT policy is to undertake annual performance reviews, starting with the staff and faculty since they have professional performance reviews (see Section 6.9.4). The interview findings (Section 6.10, Strategic Planning) also indicate that the HCT's policy is to have mid-term planning, as well as short- and long term planning. The HCT also has an action plan for mechanisms for measuring student satisfaction,

and runs focus groups to examine issues such as how students are using the technology, the software, etc., as illustrated in Chapter Six, Part Two, Section 6.13 (Focus Groups).

9.3 Implications for HCT

In terms of the HCT leadership, this research can be used as an idea for the HCT leadership to look at its findings and attempts to improve quality and review the PQA currently implemented by the HCT. The present study has identified areas of weaknesses or gaps within the PQA, as demonstrated by the responses of the staff members involved in the study, and also by the students in their responses to the SERVQUAL questionnaire.

Using the findings of the present study:

- The HCT leadership needs to develop a better performance measurement system for the collection, analysis and reporting data and information concerning the performance of the HCT.

- Leadership needs to appreciate the concept of quality and the PQA measures, procedures and processes due to the fact that appreciating these concepts and issues is an imperative step prior to any phase of quality programme implementation.

- HCT's Leadership needs to involve staff more in decision-making process by promoting down-top flow of information to help leadership make appropriate decisions relating to implementing and improving quality programmes.

- Leadership can also derive from the findings of the present study a better awareness and insight of the activities undertaken by the HCT and how to deal with such activities.

- Furthermore, the leadership needs to set up explicit, quantifiable and feasible results as well as time plans to evaluate the progress towards PQA implementation.

- HCT's leadership should convey their continuous commitment to the implementation of quality programmes by focusing on organisational values and norms, that is, HCT culture, and performance expectations and also concentrating on students and staff, student learning, staff empowerment, innovation, and organisational learning and directions.

- In terms of strategic planning, HCT's leadership should sustain the strategic development process, strategic objectives and action plans concerning colleges and staff resource plans, attend to student and staff needs, and consolidate HCT performance.

- With regard to student focus, the HCT must have processes and approaches that can facilitate the determination of short- and long-term requirements, expectations and preferences, and inclinations of students, and develop relationships with students as well as to determine and constantly further their satisfaction.

- As for staff focus, the HCT needs to enable staff to develop and use their full potentials that are in line with its mission and objectives, and to establish and sustain a work environment that is encouraging performance excellence.

- The HCT must have a slant towards process management, embracing learning-focus in educational programme design and provision, and support services.

- The HCT leadership needs to re-think about how to change curriculum and pedagogy and prepare young UAE nationals. Current quality assurance programmes implemented need to be reconsidered and revised to meet the demand of the new era, and to prepare young UAE citizens for the future.

- With the intensifying competition in higher education in the UAE, especially between many private sector universities and colleges and state-run higher education institutions, students have more choice of admission to various courses and programmes. Accordingly, it is not easy for HCT to gain and sustain competitive advantage based on the strategy of offering courses. Instead, defining students' needs and inclinations and their related quality dimensions are the key

driving force in enhancing students' satisfaction and attracting more students. The HCT authorities need to pay attention to all five dimensions discussed above and attempt to close the gaps as much as possible.

9.4 Implications for Future Research

The present study findings can be enhanced and validated by involving more higher education institutions, to identify gaps and attempt to close them. Future studies may also involve higher education institutions in other Arab Gulf states. It is also essential to investigate the critical success factors for the implementation of the PQA.

With the expansion in higher education institutions in the UAE, there are certain areas that need to be explored. Future research in this field can make many extensions of the present study, for example, by introducing and testing new dimensions on top of the five SERVQUAL dimensions.

The present study has been undertaken to find the association between service quality dimensions and satisfaction from the students' perspective. The study can be undertaken to explore and include staff point of view, i.e., assessing staff perspectives and their position concerning what they can or may identify as service quality variables to satisfy students. This could further confirm or disconfirm the presence of any further dimensions.

9.5 Research Limitations

Like any other research, there had been certain research limitations. There is a possibility that using other models would enhance our understanding of how the HCT system works. Other systems were not used, such as EFQM and SERVPERF. However, quality assurance programme adopted by the HCT (PQA) is mainly designed following the American quality models; hence, it was decided to use the Baldrige model.

Other stakeholders, including the industry, parents and community were not involved in the study. Involving these stakeholders would have been outside the scope of the

present study and would have much longer time to take and much harder task to embark upon.

Other analysis techniques, like LISREL were not used, to tackle the issue of causality in the Baldrige model as there are different ways to formulate the interactions between different variables in the model as discussed earlier in the thesis.

9.6 Conclusions

The main conclusions of the present study can be summed up as follows:

- Quality programmes can be put into practice in higher education environment in general, and within the context of the HCT, given the successful implementation examples both in developed countries and developing countries.

- The majority of staff involved in the study were non-UAE nationals. The HCT system is built up on the basis of international standards, and the HCT attracts professional staff (faculty and administration) from all over the world, including the UAE nationals. This led to offering responses from a wide range of experiences and expertise.

- Staff members hold various qualifications (higher diplomas to Ph.D. degrees), which conforms to the HCT policy to recruit staff with higher educational degrees to teach and administer various programme offered by the HCT.

- HCT staff believe that the HCT leadership has a quality interest and an understanding of the significance of quality, as well as the awareness of the significance of improving quality and willingness to practise it. This confirms the importance of leadership commitment to quality, and corroborates previous studies concerning the commitment of leadership in successful implementation of quality programmes.

- HCT's top management seems to be highly aware of the significance of the strategic planning for improving HCT's educational service quality. This reflects

lesser consideration for several issues relating to how the HCT management develops strategic objectives and action plans, and related faculty and staff resource plans, and how strategic objectives and action plans are deployed and changed if circumstances require, and how progress is measured.

- With regard to Student Focus criterion of the MBNQA, research findings entail that the HCT have some systematic approach in position for the practices and processes relating to building relationships to attract, satisfy, and retain students and to increase student loyalty, and also how HCT determines student and stakeholder satisfaction and dissatisfaction.

- It appears that the HCT has established a measurement analysis system, though it is not used to the desired standard, to disseminate useful data and information to all relevant faculties, departments and staff. Hence, it can be argued that while the current system is good, the HCT still needs to improve and focus on its information and analysis system in order to integrate, disseminate and assess useful data and information to help make improvement in the selection and use of such data and information. To this effect, it can be concluded that there is some evidence for a system for information and analysis at the HCT to collect and analyse measures of satisfaction of staff, a system to make sure that staff satisfaction measures relate to education environment and needs of students and staff, and a process to ensure that data and information are complete, accurate, reliable and appropriate.

- In terms of staff focus category, study findings also demonstrate that the HCT has a systematic approach in place for the practices and processes concerning how the HCT engages, manages and develops its staff to utilise its full potentials in alignment with the HCT's overall mission, strategy, and action plans. Nonetheless, this system needs further development or improvement.

- With regard to Process Management categories, it can be concluded that the HCT has a systematic approach in place for the practices and processes concerning how the HCT determines its core competencies and work systems and how it designs, manages, and improves its key processes for implementing such work systems to

deliver student and staff value and achieve organisational success and sustainability, as well as concerning the HCT's readiness for emergencies.

- In terms of the Results criterion, research findings clearly indicate that the HCT has some systematic approach in place for the practices and processes relating to student learning outcomes; student- and staff-focused outcomes; budgetary, financial, and market outcomes; process effectiveness outcomes; and leadership outcomes.

- Concerning the added eighth criterion, that is, organisational culture, the study findings indicate that the HCT has some systematic approach in place for the practices and processes relating to how HCT organisational culture influences flexible implementation of the quality programmes, encourages involvement of all staff in the implementation of the current quality programme, promotes innovative approaches by HCT staff, helps in providing adequate information and opportunity for staff to become more creative, helps develop a holistic approaches to quality, how HCT Management actively seeks new ideas staff have opportunities to use their skills effectively in their jobs, and how they are encouraged to find new methods and ways of doing things.

- The eight criteria used were highly and significantly correlated with each other, indicating that each one of these variables positively influences and affects the remaining seven variables. The HCT's organisational culture was also found to have substantial influence of the outcomes of the other seven categories of the MBNQA.

- Quantitative Research findings indicated that Strategic Planning is related to Leadership and MAKM ($H_{1.1}$), Staff Focus is related to Leadership and MAKM ($H_{1.2}$); Process Management is related to Strategic Planning, Staff Focus and MAKM ($H_{2.1}$), Process Management and Leadership are indirectly related through Strategic Planning and Staff Focus ($H_{2.2}$), Staff Focus is related to Strategic Planning, Student Focus and MAKM ($H_{2.3}$), Student Focus and Leadership are indirectly related through Strategic Planning and Staff Focus ($H_{2.4}$), Results is related to Process Management and Student Focus ($H_{3.1}$), Results and Leadership

are indirectly related through Strategic Planning, Process Management, Staff Focus and Student Focus ($H_{3.2}$), and There is a relationship between Organisational Culture and the MBNQA seven Criteria ($H_{4.1}$).

- With regard to student satisfaction with the services provided by the HCT, it can be concluded that the majority of respondent students agreed with the 21 items of the SERVQUAL questionnaire.

- The Tangible dimensions were the utmost concern by HCT students, followed by the Assurance dimensions.

- Despite the agreement with all questionnaire items there is still a gap concerning the tangibility and assurance dimensions, though less than in the case of the Empathy, Responsiveness and Reliability dimensions.

- The ANOVA test does not show any significant differences with regard to reliability, responsiveness, empathy and tangibles, both between groups and within groups, but a significant difference between groups and within groups concerning assurance category.

- Finally, it can be concluded that the MBNQA has offered a valid and reliable framework which can be employed as an instrument for quality programme implementation in the HCT, having identified fields of strengths in the currently implemented PQA, as well as weaknesses, or gaps, that should be strengthened and augmented to help the successful implementation of the quality programmes.

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APPENDICES

Appendix I

Leadership

1. Senior leaders create strategic directions*
2. Senior leaders communicate a clear vision*
3. Senior leaders guide in setting organizational values
4. Senior leaders set specific action plans for successful implementation of strategic objectives
5. Senior leaders show strong commitment to policies and strategies*
6. Senior leaders guide in setting performance expectations
7. Senior leaders continuously communicate with staff and faculty*
8. Senior leaders continuously address the needs of students and community
9. Senior leaders create an environment characterized by ethical behavior
10. Senior leaders create an environment that encourages learning
11. Senior leaders create an environment that takes into account key development needs of students, staff and faculty
12. Our governance system ensures accountability of staff and faculty members
13. Our governance system ensures monitoring the performance of our senior leaders*
14. Our governance system ensures protection of students' interests
15. Our senior leaders are accessible to students and faculty and staff*
16. Our governance system ensures protection of faculty and staff interests
17. Our governance system ensures protection of community interests
18. Senior leaders continuously review our organizational performance
19. Senior leaders continuously review our organizational capabilities
20. Senior leaders communicate the importance of continuous improvement and quality*
21. Senior leaders continuously use reviews to assess our performance relative to our competitors
22. Senior leaders continuously use reviews to assess our progress relative to short and long term goals
23. We have an established set of performance measures
24. Senior leaders use our performance measures for setting future directions

25. We have a formal procedure to evaluate our senior leaders*
26. External bodies perform some organization performance reviews*
27. Leadership performance evaluation is supported by feedback and survey data from faculty and staff*
28. Leadership performance evaluation is supported by feedback and survey data from parents
29. Our leaders address the impact of our programs and offerings on society*
30. We establish key measures for achieving international accreditation requirements*
31. We establish key measures for achieving local-national accreditation requirements
32. We establish key measures for addressing risk associated with our programs
33. We integrate public responsibility into performance improvement efforts
34. In our planning, we anticipate public's concern with our programs and offerings
35. In our planning, we anticipate public's concern with our future programs and offerings*
36. We support and encourage the community service of our faculty
37. We give students the opportunity to develop their social and citizenship values and skills
38. We ensure ethical behavior in all our students
39. We ensure ethical behavior in all our faculty and staff*
40. We ensure ethical behavior in all our higher administration
41. We have established clear measures to monitor ethical behavior of students, faculty and staff
42. We have established clear measures to monitor ethical behavior of our partners (i.e. vendors)
43. Our organization is sensitive to public issues
44. We practice and support good citizenship in our organization
45. We try to portray ourselves as role models when it comes to public responsibility, ethics and citizenship*
46. Our faculty is actively engaged in support of our key communities
47. Our senior leaders are actively engaged in support of our key communities
48. Our organization supports efforts to strengthen our local communities*

49. We lead efforts to improve community services, including environmental programs

Strategic planning

50. We follow a formal/informal process of strategy development
51. We utilize various types of forecasts, projections, options, and scenarios in decision making about our future*
52. Our strategies usually lead to changes or modifications in programs, services, and use of technologies.
53. We involve faculty and staff when developing our strategies
54. We involve stakeholders when developing our strategies
55. We perform studies to identify the factors that affect our organization's future
56. We gather and analyze relevant data and information for our strategic planning process
57. We take a long-term view when planning for our organization's future opportunities and directions
58. Our strategic development process is student, stakeholders, and market-focused*
59. Our strategic development process takes into account our competitors weaknesses and strengths
60. We ensure that our strategic planning addresses student learning and development*
61. We specify timetables for accomplishing our strategic objectives
62. Our strategic objectives directly address the challenges outlined in our organizational profile
63. Our strategic objectives are aimed at developing a competitive leadership position in our educational offerings
64. Our long-term vision guides our day-to-day activities
65. Our strategic objectives address both short- and long-term challenges and opportunities*
66. Our strategic objectives balance the needs of all student and key stakeholders
67. Partnership with our community support our strategic plans

68. We convert our strategic objectives into short- and long-term action plans to accomplish the objectives
69. Strategic plans are translated into specific requirements for each work unit or department*
70. Improvement plans are regularly upgraded
71. We continuously assess progress relative to these action plans
72. We allocate necessary resources for carrying out these action plans
73. We use key measures and indicators in tracking progress relative to action plans
74. Strategic decisions are evaluated with objectives measures or indicators
75. We continuously develop human resource plans (i.e. education and training) that will enable accomplishment of our strategic objectives and action plans*
76. We use key established measures or indicators to performance projection*
77. Short and long term decisions and actions are aligned with our strategic plans
78. We compare our projected performance with the projected performance of competitors and key benchmarks
79. Our strategic plans include reducing waste (including idle time, materials, etc.) in all departments
80. We use measures or indicators to track dynamic, competitive performance factors
81. Our tracking mechanism of performance measures or indicators are utilized as key diagnostic tool

Student Focus

82. We have well established mechanism for determining student needs and expectations*
83. We have created a climate conductive to learning*
84. We analyze student complaints to improve our services
85. We conduct regular student surveys for better listening and learning
86. Our educational programs and services address the needs of "special students"
87. We have an effective student placement service unit*
88. We provide a variety of extracurricular activities
89. Our educational programs emphasize "problem solving" approaches*
90. Our educational programs emphasize "learning and communication skills"
91. Our educational programs emphasize "critical thinking skills"
92. Our programs are relevant to community needs
93. Our educational programs are dynamic and keep pace with market changes*
94. We conduct regular visits to high schools to promote our university and
95. We conduct regular visits to community and industry to promote our university and programs
96. We use feedback from our alumni to assess our programs and offerings
97. We use feedback from our stakeholders to assess our programs and offerings*
98. We conduct regular stakeholders' surveys for better listening and learning
99. We take into consideration changing methods of delivering educational services*
100. In planning our programs, we take into account global and international requirements*
101. We continuously build active relationships with students and stakeholders
102. We have developed partnerships and alliances with students and stakeholders
103. We build active relationships to enhance student performance and expectations
104. We have modern mechanism for students and stakeholders to access information about our programs*
105. We have modern mechanism for students/stakeholders to make complaints about our programs/ services

106. We have set a process that ensures that complaints are resolved effectively and promptly
107. We have established effective mechanism for determining student/stakeholders satisfaction/ dissatisfaction*
108. We use students/stakeholders satisfaction/dissatisfaction information to improve programs/services*
109. We use “drop-out rates”, “absenteeism”, “complaint data” as methods to determine student/stakeholder satisfaction/ dissatisfaction
110. We use modern technologies (internet) for determining satisfaction/dissatisfaction
111. We use satisfaction/dissatisfaction data to determine value, cost and revenue implications
112. We seek information from staff and faculty for building long-term partnership with students and stakeholders

Measurement, Analysis, and Knowledge Management (MAKM)

113. We collect and integrate information on evidence of student learning*
114. We collect and integrate information for tracking daily operations
115. We use data and information for tracking overall organization performance*
116. We use data and information to support organization decision making
117. Information systems are used to link our programs and services with student outcomes*
118. We obtain data and information by benchmarking and seeking competitive comparisons
119. We collect and utilize information on mistakes, complaints, and customer dissatisfaction
120. We ensure the effective use of key comparative data from within and outside the educational community
121. Our performance analysis includes examining trends
122. Our performance analysis includes organizational and academic community projections
123. Our performance analysis includes technology projections
124. Our performance analysis includes comparisons and cause and effect relationships
125. Our performance analysis help determine root causes and set priorities for resource use
126. Our performance analysis draws upon all types of data (student, programs, stakeholders, market, operational, budgetary and comparative data)
127. Results of our performance analysis contribute highly to senior leaders' review and strategic planning
128. We ensure the availability of high quality information for key users*
129. We ensure the availability of timely data and information for key users
130. Our data and information are accessible to our partners (communities and stakeholders)
131. We ensure that our hardware and software are reliable, secure and user friendly*

132. We ensure that data, information and organizational knowledge enjoy appropriate levels of security and confidentiality
133. We ensure that data, information and organizational knowledge enjoy integrity, reliability, accuracy and timeliness
134. We encourage the use of electronic information*
135. Our information systems are standardized across departments
136. We encourage the use of the internet for information storage and access
137. We encourage the use of advanced information technology to communicate with our students
138. We ensure that our people keep current with changing educational needs and directions*
139. We constantly develop innovative solutions that add value for our students
140. We constantly develop innovative solutions that add value for stakeholders
141. The focus of our knowledge management is on the knowledge that our people need to do their work
142. The focus of our knowledge management is on the knowledge we need to improve processes, programs and services
143. Our organizational knowledge system focuses on the identification and sharing of best practices

Staff Focus

144. We have effective ways to organize and manage work and jobs to promote empowerment and innovation
145. We ensure that the skills and experiences of our staff and faculty are equitably distributed
146. We have effective ways to organize and manage work and jobs to achieve the agility to keep current with educational service needs
147. We motivate employees by improved job design
148. Our work system capitalizes on the diversity of culture and thinking of our faculty, staff and communities
149. We achieve effective communication and skill sharing across departments and functions*
150. Our work system ensures ongoing education and training for our staff and faculty*
151. Our PMS includes feedback to faculty and staff*
152. Our PMS supports a stakeholder focus
153. Our compensation, recognition, and related reward and incentive practices reinforce high performance work
154. Our PMS is characterized by a focus on student achievement and innovation*
155. Our compensation and recognition system is tied to efforts in community and university service
156. Our compensation and recognition system is tied to student evaluation of teaching and classroom performance
157. Our compensation and recognition approaches include rewarding exemplary performances*
158. Our PMS emphasizes consistency between compensation and recognition
159. We have an effective mechanism to identify skills needed by potential staff and faculty
160. We have an effective way of recruiting and hiring faculty and staff
161. We have an effective way of retaining faculty and staff
162. We ensure that our faculty and staff represent diverse ideas, cultures, and thinking*

163. We have established an effective succession planning for senior leadership and supervisory positions
164. We manage effective career progression for all faculty throughout the organization*
165. We manage effective career progression for all administrative and technical staff throughout the organization
166. We ensure that our faculty and staff are appropriately certified and licensed when required
167. Our faculty promotion process is based on accepted principles of academic performance
168. Our faculty and staff education and training contribute to the achievement of our action plans
169. We utilize faculty and staff education and training delivery programs both inside and outside our organization
170. Our faculty and staff education and training addresses our key needs associated with our organizational performance improvement and technological change*
171. We seek and use input from faculty and staff and their supervisors on education and training needs*
172. We deliver education and training to our staff and faculty using diverse modern methods*
173. We reinforce the use of new knowledge and skills obtained by faculty and staff on the job*
174. We regularly evaluate the effectiveness of education and training obtained
175. We provide appropriate orientation of new faculty and staff as part of our education and training programs
176. We have effective ways in motivating faculty and staff to develop and utilize their full potential*
177. We use formal/informal mechanisms to help faculty and staff attain job- and career-related development and learning objectives
178. Faculty and staff appraisals include personal improvement plans*
179. We provide many opportunities for faculty and staff professional development*

180. Our senior leaders and supervisors help faculty and staff attain job- and career-related development and learning objectives
181. To help faculty and staff utilize their full potential we use individual development plans that addresses his or her career and learning objectives
182. Our work environment supports the well-being and development of all employees
183. We continuously work to improve workplace health, safety, security and ergonomics*
184. We ensure that our faculty and staff take part in improving workplace health, safety, security and ergonomics
185. We have established set of measures or indicators for each of these key workplace factors
186. We continuously solicit faculty and staff to communicate to us their work environment problems
187. We ensure workplace preparedness for emergencies or disasters
188. We have established key factors that affect faculty and staff well-being, satisfaction and motivation
189. Our key factors are segmented for our diverse workforce
190. We support our faculty and staff via services, benefits, and policies*
191. We provide various faculty and support services (i.e. counseling, career development, day-care)
192. We provide various recreational and cultural activities to our faculty and staff*
193. The services, benefits and policies are tailored to the needs of our divers workforce
194. We use formal/informal assessment methods and measures to determine faculty and staff well-being, satisfaction and motivation
195. We relate assessment findings to key organizational performance results to identify priorities for improving our work environment
196. We ensure effective resolution of faculty and staff problems and grievances

Process management

197. We have effective ways in determining and ensuring our LCP
198. We use effective key LCP that deliver our educational programs and offerings*
199. Our LCP create value for the organization, students, and our key stakeholders
200. Our LCP address student educational and developmental needs to maximize their success*
201. We incorporate inputs from students, faculty, staff and stakeholders to determine key LCP requirements
202. We ensure that our faculty and staff are properly prepared to deliver our LCP
203. Our LCP take into account student learning rate differences
204. We incorporate new technology and organizational knowledge into the design of our LCP*
205. We use key performance measures for the control and improvement of our LCP*
206. We continuously improve our LCP to maximize student success and improve educational programs
207. We have effective ways in determining and ensuring our key SP's*
208. We use effective key SP's for supporting our LCP's
209. We incorporate inputs from students, faculty, staff and stakeholders to determine key SP requirements
210. We design our SP's to meet all the key requirements we have already identified
211. We incorporate new technology and organizational knowledge into the design of our SP's*
212. We use key performance measures for the control and improvement of our SP's
213. We try to minimize overall costs associated with process and performance audits and SP's
214. We prevent errors and rework in designing our SP's
215. We continuously improve our SP's to achieve better performance and to keep current with organizational needs*

Results

216. Overall measures or indicators of student learning results*
217. The effectiveness of our programs segmented by majors and disciplines*
218. Current levels and trends in key measures or indicators of student learning
219. Student learning results (and trends) for each student segment
220. Student learning results represented by requirements derived from our markets*
221. Correlation between education design and delivery and student learning
222. Improvement trends in student admission qualifications*
223. Improvement in student learning beyond what which could be attributed to entry-level qualifications
224. Educational services attributes as evidence of student and stakeholder satisfaction
225. Positive referrals to and recommendation of our services by students and stakeholders
226. Relevant data that determine and predict our performance as reviewed by students
227. Current levels and trends in key measures or indicators of student satisfaction
228. Current levels and trends in key measures or indicators of stakeholders' satisfaction
229. Students and stakeholder loyalty
230. Student and stakeholder perceived value of organization*
231. Student and stakeholder relationship after graduation (alumni loyalty)*
232. Results of student/stakeholder satisfaction measures
233. Trends of gains and losses of students from or to other schools or alternative means of education
234. Feedback from students and stakeholders on their assessment of our educational operation*
235. Trend data on instructional and general administration expenditure per student
236. Trend data on cost per academic credit
237. Maintaining control over cost while better utilizing income and resources
238. Budgetary and financial results as tools for better utilization of resources
239. Key budgetary, financial and market indicators

240. The effectiveness of management of financial resources
241. Financial measures' data
242. Current levels and trends in key measures or indicators of market performance and market share
243. Designing and experimenting with realistic scenarios reflecting budget increases and decreases
244. Current levels and trends in key measures or indicators of student enrolment and transfer rate
245. Creating and maintaining a positive and productive environment for faculty and staff*
246. Creating and maintaining a learning-centered environment for faculty and staff
247. Creating and maintaining a caring environment for faculty and staff
248. Enjoying an effective faculty and staff work system performance
249. Trends showing improvements in job classification and work design
250. Local and regional comparative data on faculty and staff well-being
251. Improved levels of faculty and staff satisfaction*
252. Extent of training and cross-training of staff and faculty
253. Trends in experiencing improvements in faculty turnover and absenteeism Organizational performance results (organizational effectiveness results)
254. Experiencing annual increases in overall productivity of scientific research measures
255. Experiencing improvements in timeliness in all key areas of educational and student support areas*
256. Continuously improving admission standards
257. Annual improvements in administrative performance
258. Annual funds and budgets allocated for scientific research
259. Annual funds and budgets allocated to innovation in teaching
260. Emphasis on athletic programs
261. Increased use of web-based technologies*
262. Cost containment initiatives and redirection of resources
263. Experiencing positive annual increases in external funds obtained through research and services
264. Recording positive annual increases in the number of faculty research publications

265. Maintaining an effective management of financial resources
266. Showing upward scores of stakeholders' trust in the organization*
267. Maintaining current accreditation of programs while working towards seeking accreditation of other programs
268. Appropriately and optimally using the funds allocated by the federal government
269. Advisory boards and senior leaders continuously tracking relevant performance measures on regular basis*
270. Considering senior leaders to be accountable for their actions
271. Support for key communities and other public purposes*
272. Demonstrate high standards of overall conduct*
273. Measures of environmental and regulatory compliance
274. Continuously enjoying positive governance/ethical performance measures from stakeholders

APPENDIX II

Dear Staff Member,

As part of my study at University of Glamorgan, Wales, UK, I am undertaking a survey of the quality programme implemented by the HCT, UAE. The overall aim of the study is to evaluate: "***Performance of the Current Quality Programme Implemented by the Higher Colleges of Technology (HCT), United Arab Emirates (UAE), with Special Reference to Stakeholders' Satisfaction and Organisational Culture.***"

Your participation is vital for the success of this study. May I ask you to fill in this questionnaire since your responses will enable the researcher to generate the required information in order to enable him achieve his aims and objectives.

May I use this opportunity to assure you that the information generated will be regarded as strictly confidential and shall be used only for the purposes of the present study.

Thank you and I look forward to receiving your response.

Yours sincerely,

Abdulrahman Al-Hammadi,
Ph.D. Researcher
University of Glamorgan,
UK.

Personal and Organisational Information

1. Nationality:

   UAE ❑ Non-UAE ❑

   If Non-UAE National, please indicate your nationality: ……

2. Gender:

   Male ❑ Female ❑

3. Academic Qualifications:

   Higher Diploma ❑
   Bachelor's Degree ❑
   Master's Degree ❑
   Ph.D. ❑
   Others (please specify): …….

4. Age:

   20-30 ❑ 31-40 ❑
   41-50 ❑ 51+ ❑

5. Current position:

   Teaching Faculty ❑ Non-Teaching Faculty ❑
   Technician ❑ Administrator ❑
   Others (Please specify): …….

Part A. Leadership

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA…… SDA						
A.1	HCT management creates strategic directions	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.2	HCT management communicates a clear vision	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.3	HCT management shows strong commitment to policies and strategies	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.4	HCT management continuously communicates with staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.5	HCT's governance system ensures monitoring the performance of management	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.6	HCT management are accessible to staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.7	HCT management continuously reviews HCT performance	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.8	HCT management communicates the importance of continuous improvement and quality	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.9	HCT management has a formal procedure to evaluate its senior leaders	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.10	External bodies perform some of HCT's performance reviews	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.11	HCT management performance evaluation is supported by feedback and survey data from staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.12	HCT management addresses the impact of HCT programmes and offerings on society	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.13	In HCT planning, HCT anticipates public's concern with its future programmes and offerings	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.14	HCT management establishes key measures for achieving international accreditation requirements	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.15	HCT management ensures ethical behaviour in its staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.16	HCT tries to portray itself as a role model when it comes to public responsibility, ethics and citizenship.	1❑	2❑	3❑	4❑	5❑	6❑	7❑
A.17	HCT management supports effort to strengthen HCT local communities	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part B. Strategic Planning

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA……SDA						
B.1	HCT utilises different types of forecasts, projections, options, and scenarios in decision making about HCT future	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.2	Strategic development process is student focused	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.3	Strategic development process is staff focused	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.4	Strategic development process is market focused	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.5	HCT ensures that strategic planning addresses student learning and development	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.6	HCT's strategic objectives address both short- and long term challenges and opportunities	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.7	HCT strategic plans are translated into specific requirements for each work unit or department	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.8	HCT continuously develop human resources plans (i.e., education and training) which enable achieving its strategic objectives and action plans	1❑	2❑	3❑	4❑	5❑	6❑	7❑
B.9	HCT uses key established measures or indicators to performance projection	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part C. Student Focus

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA……SDA						
C.1	HCT has well established mechanism for determining student needs and expectations	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.2	HCT has created a climate conducive to learning	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.3	HCT has an effective student placement service unit	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.4	HCT's organisational programmes emphasise "problem solving" approaches	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.5	HCT's educational programme emphasise "critical thinking skills"	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.6	HCT's educational programmes are dynamic and keep pace with market changes	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.7	HCT uses feedback from its students to assess its programmes and offerings	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.8	HCT uses feedback from its staff to assess its programmes and offerings	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.9	HCT takes into consideration changing methods of delivering educational services	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.10	In planning its programmes, HCT takes into consideration global and international requirements	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.11	HCT has modern mechanism for staff to assess information about HCT programmes	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.12	HCT establishes effective mechanisms for determining student satisfaction/dissatisfaction	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.13	HCT establishes effective mechanisms for determining staff satisfaction/dissatisfaction	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.14	HCT uses students satisfaction/dissatisfaction information to improve programmes/services	1❑	2❑	3❑	4❑	5❑	6❑	7❑
C.15	HCT uses staff satisfaction/dissatisfaction information to improve programmes/services	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part D. Measurement, Analysis and Knowledge Management (MAKM)

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA……SDA						
D.1	HCT collects and integrates information on evidence of student learning	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.2	HCT uses data and information for tracking its overall performance	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.3	HCT uses information systems to link its programmes and services with student outcomes	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.4	HCT performance analysis draws upon all types of data (students, programmes, staff, market, operational, and budgetary data)	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.5	HCT ensures that high quality information is available for its students	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.6	HCT ensures that high quality information is available for its staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.7	HCT ensures that its hardware and software are reliable, secure and user friendly	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.8	HCT encourages the use of electronic information	1❑	2❑	3❑	4❑	5❑	6❑	7❑
D.9	HCT ensures that its staff keep current with changing educational needs and directions	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part E. Staff Focus

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA……SDA						
E.1	HCT achieves effective communication and skill sharing across departments and functions	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.2	HCT's work system ensures ongoing education and training for its staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.3	HCT's performance management system (PMS) includes feedback to staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.4	HCT's PMS is characterised by a focus on student achievement and innovation	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.5	HCT's compensation and recognition approaches include rewarding exemplary performance	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.6	HCT ensures that its staff represent diverse ideas, cultures and thinking	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.7	HCT manages effective career progression for all staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.8	HCT's staff education and training addresses its key needs associated with its organisational performance improvement and technological change	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.9	HCT seeks and uses input from staff and their supervisors on education and training needs	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.10	HCT delivers education and training to its staff using diverse modern methods	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.11	HCT reinforces the use of new knowledge and skills obtained by its staff on the job	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.12	HCT has effective ways in motivating faculty and staff to develop and utilise their full potential	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.13	Staff appraisals include personal improvement plans	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.14	HCT provides many opportunities for staff professional development	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.15	HCT continuously work to improve workplace health, safety, security and ergonomics	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.16	HCT supports staff via services, benefits, and policies	1❑	2❑	3❑	4❑	5❑	6❑	7❑
E.17	HCT provides various recreational and cultural activities to its staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part F. Process Management

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA……SDA						
F.1	HCT uses effective key learning-centred process (LCP) which delivers its educational programmes and offerings	1❑	2❑	3❑	4❑	5❑	6❑	7❑
F.2	HCT's LCP address student educational and developmental needs to maximise their success	1❑	2❑	3❑	4❑	5❑	6❑	7❑
F.3	HCT incorporates new technology and organisational knowledge into the design of its LCP	1❑	2❑	3❑	4❑	5❑	6❑	7❑
F.4	HCT uses key performance measures for the control and improvement of its LCP	1❑	2❑	3❑	4❑	5❑	6❑	7❑
F.5	HCT has effective ways in determining and ensuring its key support processes (SP)	1❑	2❑	3❑	4❑	5❑	6❑	7❑
F.6	HCT incorporates new technology and organisational knowledge into the design of HCT's SPs	1❑	2❑	3❑	4❑	5❑	6❑	7❑
F.7	HCT continuously improves its SPs to accomplish better performance and to keep current with HCT needs	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part G. Results

Please indicate your perception with the following, using the scale below (Key: SB = Significantly Better, SW = Significantly Worse)

Items		SB……..SW						
G.1	HCT's overall measures or indicators of students learning results	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.2	The effectiveness of HCT programmes are segmented by majors and disciplines	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.3	Student learning results represented by requirements derived from HCT markets	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.4	HCT's improvement trends in student admission qualifications	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.5	HCT students and staff perceived value of organisation	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.6	HCT's Student and staff relationship after graduation (alumni loyalty)	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.7	Feedback from students on their assessment of HCT educational operations	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.8	Feedback from staff on their assessment of HCT educational operations	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.9	HCT creating and maintaining a positive and productive environment for staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.10	Improved levels of HCT staff satisfaction	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.11	HCT experiencing improvements in timeliness in all key areas of educational and student support areas	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.12	Increased use of web-based knowledge by HCT staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.13	Experiencing upward scores of stakeholders' trust in HCT	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.14	HCT Advisory boards and senior management continuously tracking relevant performance measures on regular basis	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.15	HCT Support for key communities and other public purposes	1❑	2❑	3❑	4❑	5❑	6❑	7❑
G.16	HCT Demonstrating high standards of overall conduct	1❑	2❑	3❑	4❑	5❑	6❑	7❑

Part H. HCT Organisational Culture

Please indicate the extent of your agreement/disagreement with the following statements
(Key: SA = Strongly Agree, SDA = Strongly Disagree)

Items		SA……..SDA						
H.1	The current HCT organisational culture promotes flexible implementation of the quality programmes	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.2	HCT organisational culture encourages involvement of all internal and external stakeholders in the implementation of the current quality programme	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.3	The HCT organisational culture promotes innovative approaches by HCT staff	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.4	HCT organisational culture helps in providing adequate information and opportunity for staff to become more creative	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.5	HCT's organisational culture helps develop a holistic approaches to quality, for example, total quality management (TQM)	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.6	HCT Management actively seeks new ideas	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.7	Staff have opportunities to use their skills effectively in their jobs	1❑	2❑	3❑	4❑	5❑	6❑	7❑
H.8	Staff are encouraged to find new methods and ways of doing things	1❑	2❑	3❑	4❑	5❑	6❑	7❑

APPENDIX III

Dear Student,

As part of my study at University of Glamorgan, Wales, UK, I am undertaking a survey of the quality programme implemented by the HCT, UAE. The overall aim of the study is to evaluate: "***Performance of the Current Quality Programme Implemented by the Higher Colleges of Technology (HCT), United Arab Emirates (UAE), with Special Reference to Stakeholders' Satisfaction and Organisational Culture.***"

Your participation is vital for the success of this study. May I ask you to fill in this questionnaire since your responses will enable the researcher to generate the required information in order to enable him achieve his aims and objectives.

May I use this opportunity to assure you that the information generated will be regarded as strictly confidential and shall be used only for the purposes of the present study.

Thank you and I look forward to receiving your response.

Yours sincerely,

Abdulrahman Al-Hammadi,
Ph.D. Researcher
University of Glamorgan,
UK.

Part One: Students' Impression about the HCT's Service Performance in Relation to Students' Expectations

	Lower than my Desired Service Level								**Higher than my Desired Service Level**
My college provides services as promised	1	2	3	4	5	6	7	8	9
My college's dependability in handling students' problems	1	2	3	4	5	6	7	8	9
My college performs services right the first time	1	2	3	4	5	6	7	8	9
My college provides services at the promised time	1	2	3	4	5	6	7	8	9
My college Keep students informed about when services will be performed	1	2	3	4	5	6	7	8	9
My college provides prompt services to students	1	2	3	4	5	6	7	8	9
My college is willing to help students	1	2	3	4	5	6	7	8	9
My college is ready to respond to students' requests	1	2	3	4	5	6	7	8	9
My college staff instil confidence in students	1	2	3	4	5	6	7	8	9
My college makes students feel safe in their dealings	1	2	3	4	5	6	7	8	9
My college staff are consistently courteous	1	2	3	4	5	6	7	8	9
My college staff have the knowledge to answer students' questions	1	2	3	4	5	6	7	8	9
My college gives students individual attention	1	2	3	4	5	6	7	8	9
My college staff deal with students in a caring fashion	1	2	3	4	5	6	7	8	9
My college has the students' best interest at heart	1	2	3	4	5	6	7	8	9
My college staff understand the needs of students	1	2	3	4	5	6	7	8	9
My college provides convenient attendance hours	1	2	3	4	5	6	7	8	9
My college has modern equipment	1	2	3	4	5	6	7	8	9
My college has visually appealing physical facilities	1	2	3	4	5	6	7	8	9
My college staff have a neat, professional appearance	1	2	3	4	5	6	7	8	9
My college has visually appealing materials associated with the service	1	2	3	4	5	6	7	8	9

Part Two. Personal and Organisational Information

Gender:

Male ❑ Female ❑

College: ……

Academic Qualifications:

Course attended: ……

Leading to:

B.SC. Degree ❑

Higher Diploma ❑

Diploma ❑

Others (please specify):

……

Age:

<20 ❑

20-25 ❑

26-30 ❑

>30 ❑

Thank you for your co-operation in filling this questionnaire.

APPENDIX IV

Table IV.1.

Descriptive statistics of the eight variables with minimum, maximum, mean, and standard deviation

Variable	No.	Min.	Max.	Mean	Standard Deviation
Leadership	213	17	119	60.3	26.4
Strategic Planning	213	9	63	32.4	14.2
Student Focus	213	15	105	53.6	23.9
Information Analysis	213	9	63	28.6	13.5
Staff Focus	213	17	119	63.5	27.9
Process Management	213	7	49	23.6	11.3
Results	213	16	112	53.9	23.9
Organisational Culture	213	8	56	29.5	14.6

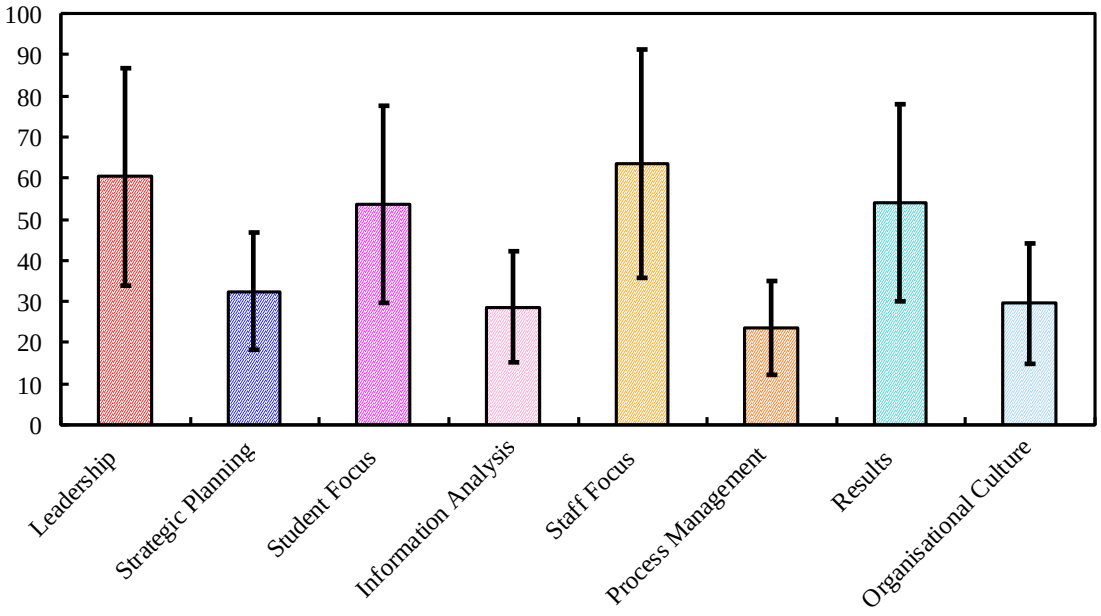

Figure IV.1.

Means and standard deviations of the eight criteria.