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Total Quality Management As A Mechanism to Enhance Quality in Higher Education in Libya

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Total Quality Management As A Mechanism to Enhance Quality in Higher Education in Libya

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Abstract

In recent years, Total Quality Management (TQM) has received worldwide attention and been adopted in many educational institutions, particularly in developed countries. However, in developing countries this field has received little attention with little research conducted into successful implementation of TQM approach in these countries.

This research assessed the adoption of TQM factors in the Libyan Higher Education institutions (LHEIs) identified the main obstacles to successful adoption.

The main aim of the study is to propose a model for effective Total Quality Management (TQM) implementation in Higher Education (HE) applicable to the Libyan context**.** A theoretical framework of the Critical Success Factors (CSFs) for implementing TQM was developed from the literature and endorsed by practitioners and experiences from other universities around the world.

Also, because the current climate in higher education places students as primary consumers, this study adopts the SERVQUAL instrument to assess the quality services from the point view of the students in the LHEIs.

In order to achieve the aim and objectives of this study, a case study approach was adopted, with the Academy of Graduate Studies (AGS) representing the private sector, and the El-fath University (FU) representing the public sector.

Both questionnaires and semi-structured interviews were utilised to fulfill the study objectives.

The questionnaire aimed to investigate the implementation of TQM in both case studies, while the semi-structured interviews with top management aimed to achieve an understanding of subjects which had emerged from the questionnaire.

In order to fully understand and assess the quality of services, the questionnaire and semi- structured interviews were conducted with the students.

The research indicates a low level of critical TQM success factors within the Libyan universities, mostly caused by minimal awareness of quality culture and it role in implementing TQM successfully.

It also indicates that quality initiatives and practices in Libyan higher education institutions are still in the early stages and most of the universities are dealing with quality as a secondary issue.

Based on these results, the original TQM framework was modified for use within Libyan higher education institutions. It prescribes guidelines for introducing TQM in three stages, and is designed to help LHEIs get started and move step-by-step towards TQM culture.

Acknowledgements

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I feel a deep sense of gratitude for my mother and brother Ibrahim for their constant encouragement.

Also my deepest esteem and gratitude to my wife and my sons Ali, Mohamed and Seraj and my lovely daughter Maram for their support and patience during the period of this research.

Dedication

To

The soul of my mother who just died recently without seeing me achieving what she wished. And I feel that she is still watching my result.

The soul of my father who encouraged me to be the best I can be, to have high expectations and to fight hard for what I believe. He always provided me with the best opportunities in life. I feel he is always with me supporting and guiding.

Declaration

This research is all of my own work and has not been copied in part or in whole from any other source except where acknowledged. As such, all use of previously published work from books, journals, magazines, websites, etc. has been acknowledged within the main thesis and referenced to an item in the references list

Abulgasem

Signature **Date** April/2013

List of abbreviation

TQM	Total Quality Management
CSFs	Critical success Factors
LHEIs	Libyan Higher Education Institutions
UNSCO	United Nation for Education, Science and Culture Organisation
MBNQA	Malcom Baldrige National Quality Award
QAA	Quality Assurance Agency
EFQM	European Foundation of Quality Management
SRR	Faculty Staff- Student Ration
DQA	Dubai Quality Award
QC	Quality Control
ALESCO	Arab Standards for Quality and Academic Excellence
ANQAHE	Arab Network for Quality Assurance in Higher Education
ARQAANE	Arab Quality Assurance and Accreditation
GCR	Global Competitiveness Report
ANSI	American National Standard Institute
ASQC	American Society for Quality Control
HE	Higher Education

Contents

List of Tables

List of Figures

Chapter One: Introductory Chapter

1.1 Introduction

There is no doubt that the education plays a pivotal role in the development and progress of any country. There has been a widespread belief that education development would lead to accelerated economic growth, more wealth and income distribution, greater equality of opportunity, availability of skilled human power, and national unity and political stability. This belief has made many societies and nations to invest heavily in education.

However, increased competition for students, reduced government funding, changing student demographics and decreased student retention are some of the numerous challenges that higher educational institutions have faced around the world.
Moreover, increasing expectations from stakeholders has resulted in rising calls for radical improvement in graduate business school education (Grey 2004).Thus, organisations that utilise public funds such as educational institutions face increasing pressures to demonstrate sufficient value in return for resources employed (Pounder et al. 2002).

The quality of education is one of the major requirements is this age of globalisation which have given rise to many problems that this institutions have to face. Therefore higher education institutions that want to overcome these challenges, cope with these difficulties, may need to search for effective and creative way to enhance their total quality systems management.

In addition, Total Quality Management (TQM) is recognised as the first step on the path towards excellent (Van *et al*. 2000), and towards maintaining excellence in higher education (Sakthivel P.B. 2007).

For this reason, many universities around the world began implementing Total Quality strategies under an administrative leadership but shied away from classroom and curriculum issues (Brigham 1993).

The main objective of quality in education is to make the general educational outputs rise above these challenges. It is therefore vitally important for higher educational institutions to adopt a global strategy for quality management, not only with a view to raising standards in education but also enhancing productivity and improving the levels of graduates who thus become scientifically and technically qualified to serve society and fulfils its expectations.

The Arabic countries, Libya is no exception, where higher educational institutions have faced problems of how to respond to dramatic changes in society business and the marketplace with well qualified graduates and quality services.
In addition, they are facing challenges that increase the pressure on them, e.g. maintaining enrolment, providing adequate resources, maintaining quality, raising funding, and strengthening the curriculum (Sims *et al.* 1995).
Moreover, some of the Arab countries such as Egypt, Lebanon, Oman, Saudi Arabia, United Emirates, and Palestinian Authority have adopted, or are on the way to adopt, rules and procedures for quality assurance and accreditation among their educational systems. However, Libya in which this research is focused is not one of those countries. These circumstances compel the Libya Higher Education Institutions (LHEI's) to adopt a new management approach that will enable it to deal with these challenges and pressures.

So it is a considerable opportunity for this research to provide the important knowledge towards helping and supporting the Libyan higher educational authority to be aware of different issues that could affect LHEI's activities towards improving the quality of their provided programmes.

1.2 The Need of Research

There are number of factors that make this study a valuable area to investigate, these factors include:

1.2.1 Quality of Libyan Higher Education

The Libyan education system does not yet fulfill the goals it has set itself, including providing the training and skills that are required to drive the economy forward

(Porter *et al.* 2006), which It is very similar to other Arab countries with regard to its universities.

Business people believe that the education system does not provide them with the skills the economy requires, and the other sectors in Libya complain that the higher education graduates in all disciplines usually need extensive re-training to make them productive (Porter *et al.*, 2006). The essence of the problem is the poor quality of their education.

According to the Global Competitiveness Report (GCR 2010 and 2012), Libya' performance is poor in terms of overall quality of the education system, ranking 138th out of 139 countries (see Table 1.1). Furthermore, the connection between education and employment is still lacking, For example, GCR (2005, 2006) ranks Libya 97th out of 111 countries in University / industry research collaboration. It means that the strong links between research institutions and business which are typically seen in developed countries; do not exist in the Libyan economy (UNESCO 2005).

Table 1.1 Ranking of Education's quality

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Source: The Global Competitiveness Report 2010-2011 © World Economic Forum

Moreover, according to Global Competitiveness Report (2007/2008 Libya), Libya at the bottom of the rank of the education quality; it is 121th out of 134 with score of 2.6 out of 7. In the line with this reports, there are many studies conducted either in Libya or through the League of Arab States, Islamic Educational Scientific and Cultural

Organization (ISESCO) and United Nations Educational, Scientific and cultural Organisation (UNESCO) concluded that the quality of higher education (in Arab countries in general and Libya in particularly) is poor. For example, the report which was submitted by education experts in Libya to the conference held on 8th to 10th September (2008) in Paris under the title (Quality Education for all Young People: Challenges, Trends and Priorities), stated that there is a dire need for the Libyan Higher Education Institutions (LHEIs) to focus on quality and promote research and implement quality system.

Also, Based on report released to the Centre of Quality Assurance and Accreditation of Educational Institutions in Libya expounded on Exploration Visits to Some Higher Education Institutions, there are some challenges facing Libyan higher education institutions. This report stated (Aimen 2012) *"There is a problem in developing and improving the academic programs in the higher learning institutions due to difficulties in the process. These difficulties are due to quantitative dimensions of education quality and the spread of the institutions in a wide geographical area"*

Regarding to Porter *et al*. (2006) and UNESCO Regional Bureau for Education in the Arab states (2003), there is no central body responsible for formulating education policy, setting standards and planning for the future skills requirements of the job market in Libya.

Choueiri (2012) stressed that only ninety eight of the top 7000 universities worldwide are in the Arab world are amongst the top one thousand universities, according to a webometrics study that appeared in July 2011. This is due, among other things, to a lack of researchers and a weak presence in the digital world arena and the quality of higher education outcomes.

Additionally, there is a general agreement among Libyan educators about the importance of quality improvement of the services provided by Libyan HEIs (Libyan delegation report, 1998; Garyounis University, 2008).

Thus, the higher education sector in Libya suffers from many problems, and facing many challenges. So, in order to meet these challenges, there is an urgent need to apply TQM in education (Nilufer *et al*. 2002).

1.2.2 Lack of Empirical Research in the Developing Countries

Although there is much evidence in the literature of research being carried out in established economies, it is evident that there is a limited amount of research being undertaken concerning TQM in developing countries. There is a lack of theories and generic models of TQM implementation that are empirically based and validated (Thiagarajan *et al*. 2001). Moreover, Gosen *et al.* (2005) stated that:

"*A number of gaps are identified in the literature on quality management in developing countries along with significant challenges including differing perceptions of quality*".

However, due to the globalisation, there is a growing interest in quality in developing countries and in the Middle East region (Baidoun *et al.* 2003). It is appropriate, therefore, for studies in TQM implementation to be conducted for the benefit of the managers in these developing countries, where the need is confounded by a dire lack of total quality management information (Thiagarajan *et al*. 2001, Ali 1997).

Thus, the findings of such systematic studies will generate a new way of thinking concerning TQM in the various culture contexts.

This research addresses a major gap in the literature by empirically investigating TQM implementation in higher education sector in developing country, namely, Libya.

1.2.3 Personal Motivation

The researcher is a lecturer at several Libyan universities including the both case studies, so he knows from his experience that the education sector in Libya suffers from many problems in terms of quality. As a result, the researcher felt it was appropriate to investigate the possibility of TQM implementation in Libyan higher education to identify the barriers they face which prevents them from improving. Building on the research findings and considering other university experiences, a

framework will be developed for implementation and maintenance of quality in this sector.

1.3 Research Problem

Sekaran (2003) defines a research problem as "*any situation where a gap exists between the actual and desired state* "**.**

The research' problem is based on the fact that the Libyan higher education sector is facing quality problems (as mentioned earlier).

Additionally, UNESCO (2003b) points out that quality assurance and accreditation of HEIs and programs are quite new in most of the Arab states, and is still absent in many of them.

Salameh (2011) concluded that the TQM is one modern approach, which its adoption is still limited in Arabic country, particularly at higher education institutions

In the light of the above discussion, quality initiatives in the Arab HE systems in general, and in the Libyan HE system in particular, are strongly recommended and required in order to improve and strengthen the quality services provided by such systems.

Accordingly, the Libyan Delegation Report (1998) highlighted the following points concerning quality in HE:

- The concept of quality should comprise all functions and activities of HE.
- HE should be distinct in its international dimension.
- The skills of academic employees should be developed.
- It is necessary to co-operate with regional and international expertise.
- Quality standards should be developed related to the labour market and get

Maximum benefits from new technology

The research focus of this study comes from the day to-day management problems in Libyan Higher Education Institutions (LHEIs), caused mainly by the absence of quality implementation in the Libyan context.

Thus, conducting research in this field is essential to gain the desired result.

Figure 1.1 shows how the research problem was defined

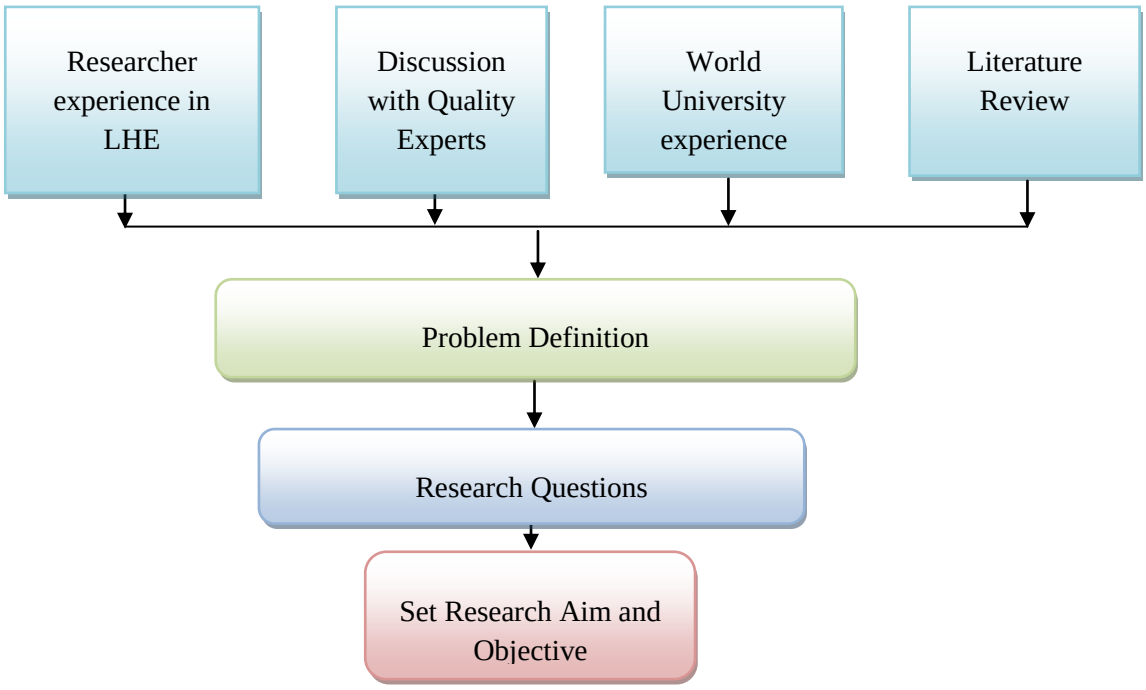

Figure 1.1: Research Problem Definition (Author)

1.4 Research Outline

1.4.1 Aim of the Research

The aim of this research is to propose a model for effective Total Quality Management (TQM) implementation in Higher Education (HE) applicable to the Libyan context**.**

1.4.2 Objectives

1. To investigate the current best practices and experience of TQM implementation in the world class University.
2. To investigate the extent to which the (LHEIs) adopt the principles of TQM.
3. To evaluate and measure the customer perception of quality service.
4. To propose a framework for TQM implementation appropriate to the Libyan context.

Research Questions:

- What are the current beast practices of TQM in higher education?
- Do the Libyan universities adopt TQM elements? If yes to what extent?

- Are students satisfied with services quality offered by LHEIs?

1.4.3 Expected Contributions to knowledge

There is a gap in the knowledge and understanding of the implementation of TQM in various countries of the world e.g. Africa, Middle East and South America.
Moreover, there is a lack of empirical studies relating to TQM outside developed economies (Sila *et al.* 2002). This study, therefore, is designed to propose a framework for effective TQM implementation in Libyan HE, and to fill the gap in the knowledge and understand TQM practices in developing countries by emphasising the Libyan context.

This study is significant in two ways. First, from a theoretical perspective, the study is intended to contribute to the growing body of literature on quality management in general, and at the same time contribute to the conceptual treatment of TQM applications to higher education specifically. Second, two case studies will reveal how the application of TQM principle works in practice. Therefore, there is a potential for other education instaurations to benefit from this study.

The implications of the study are very helpful for Libyan HEIs to implement TQM practices and improve their quality, and for the Libyan Government to support institutions to adopt TQM principles and improve their quality, which in turn, will have a positive impact on all other relevant sectors.
The current study, to the best of the researcher's knowledge, is the first to investigate and compare the level of TQM implementation in public and private Libyan universities. Likewise, this study could enhance the thinking of the decision makers in higher education institutions to adopt and adapt TQM principles to create a better management style enable them to provide services that meet the needs and expectations of their customers.

1.5 Methodology

In this research eight factors have been recognised as critical for successful TOM implementation in LHE sector. These are based on an extensive study of previous

research on TQM in general and in higher education in particular. Moreover, it was combined with quality gurus' philosophies, empirical surveys, case studies, quality awards, ISO 9000, experience of other universities around the world, and seeking educational experts' opinions in Libya. For each of the eight factors, a number of items related to the Libyan culture were carefully formulated as:

Leadership (5 items) - Training &Education (6 items) - Continues Improvement (6 items) – Student & Stockholders (5 items) – Employee' Involvement (6 items) – Organisational Structure (7 items) - Financial condition (8 items) - Academic (8 items).

By using questionnaire and interviews, data is collected to measure the quality culture at both case studies through these critical success factors.

In the other part of this study, quality services were assessed by utilising SERVQUAL instrument, which five dimensions were adopted include: Tangibility, Assurance, Reliability, Responsibility and Empathy.

So, this study is designed to investigate the quality culture of the LHEs, and to explore the extent to which the critical success factors are practiced at these case studies, and to recommend a framework for TQM implementation appropriate to the Libya context.

SERVQUAL instrument were used to analysis the gap between the student expectations and perceptions.

EL-fath University (FU) and the Academy for Graduate Studies (AGS) are utilised as case studies, and the top management at the both case studies and officials in higher education ministry, in addition to students are a target population. Section 5.7.2 will highlight the justification of selection these case studies.

1.5.1 Research Design

The research design of this study involved methods used to describe the environment of (LHEs) (through 2 case studies), and to examine the current state of quality culture elements in both case studies.

The best practices in universities around the world are another foundation in order to develop an appropriate TQM model for LHEIs to create a quality culture in which to compete locally and globally.

For this purpose two techniques were employed and the research will be designing according to both Qualitative and Quantitative methods.

1.5.2 Tool development

This study will include two kinds of data:

Secondary Data: this is represented in the Literature survey and reports, memos, conferences, proposals and newspaper articles.

Primary Data: Through questionnaires and personal interviews. The questionnaire will be developed, trailed, modified and then distributed to the respondents in the two case studies. Questionnaire and interviews will be carried out with committee of Higher Education, University's People's committee, faculty people committee, head departments, and students in two case studies.

The external validity and reliability of the Questionnaire will be ensured through the pilot survey questioner.

1.6 Data collection

Both quantitative and qualitative data will be used and analysed in order to fully investigate the quality culture of the case study, and to assess the practices of the critical success factors. The process of integrating these diverse paradigms can better illustrate the findings, and complete each other in effective way.

Qualitative research is based on interviews, meeting, and observations. In the Quantitative research the survey technique is the most widely used method, and will be relevant to this study.

There will be three types of data to be collected, the first about the basic background information of the respondents, these include: gender, age, the highest degree earned. The second part about the institutional quality culture that relates to TQM such as: Leadership; training & Education; continues improvement; Students and stakeholders; employee's involvement and structure & system. Moreover, the data will be gathered

in order to assess the financial and academic conditions at the case studies. The third part will be about the services provided to the students in order o determine their satisfaction with the services provided to them, and which reflect the quality of the Institutions.

A five- point likert-type scale, anchored at 1 strongly agree, 2 agree, 3 not sure, 4 disagree and 5 strongly disagree; will be used to measure the respondents of perception on each item for TQM.

1.7 Research hypotheses

This research based on the hypotheses that the quality of Libyan Higher Education (LHE) is poor and the sector suffers from many problems and facing many challenges.

1.8 Thesis Structure

This thesis is organised as follows:

- **Chapter One**

This chapter introduces the study, the need for the research, the research aim, and the specific objectives that flow from those. Additionally, it outlines the intended contribution to knowledge, the proposed methodology, and the layout of the thesis.

- **Chapter Two**

This chapter is divided into two sections:

Section one: TQM in general which includes: Definitions of quality, the History of Quality, Development of Quality, Definitions of TQM, Barriers to TQM, Requirements of TQM, Gurus of TQM and TQM Tools.

Section two: TQM in Service sector which including:

Different between Manufacturing and Service sector, the concept of HE, the Experiences of some Universities around the world, Customer of Higher Education, and TQM frameworks (EFQM, MBNQA,…) and the basic principles of TQM.

Section three: This chapter provides the Theoretical Framework which includes: Leadership, Training &Education, Organiational structure, Continues improvement, Employee involvement, Academic and financial situations.

Moreover, it provides in depth discussion about the dimension of the SRVQUAL instrument which has been used to measure the quality gap.

- **Chapter three**

This chapter provides information about Libya. It gives an overview of the country in terms of Geographical location and historical background. The greatest emphasis is on the HE sector in Libya.

- **Chapter Four**

This chapter discusses the research Methodology used in this research. It describes the Research Philosophy, Research Approach, Research Strategy, and Data Collection Methods. It considers the Validity and Reliability of the Methods of Analysis employed to address the aim and objectives of the research.

- **Chapter Five**

This chapter presents the research Findings and the gathered data from the two case studies (FU, AGS) , including data collected from questionnaire as the main source of evidence, interviews, documentation, archival records, and direct observations.

- **Chapter Six**

This chapter presents the Discussion of the Quantitative and Qualitative Data gathered and Analysed.

It is including the discussion of the Quality culture and the Quality services.

- **Chapter Seven**

This chapter presents the Proposed Framework which will include three stages;

Stage one: Creating the Appropriate Climate.

Stage two: Implementation Decision

Stage three: Application and Expected Results.

- **Chapter Eight**

This chapter provides Conclusions and indicates how the aim and objectives of the research have been met. Additionally, the originality of the study and the resulting

Contributions to Knowledge are discussed. Finally, Recommendations are made for further research.

Figure 1.2 shows the structure of this thesis

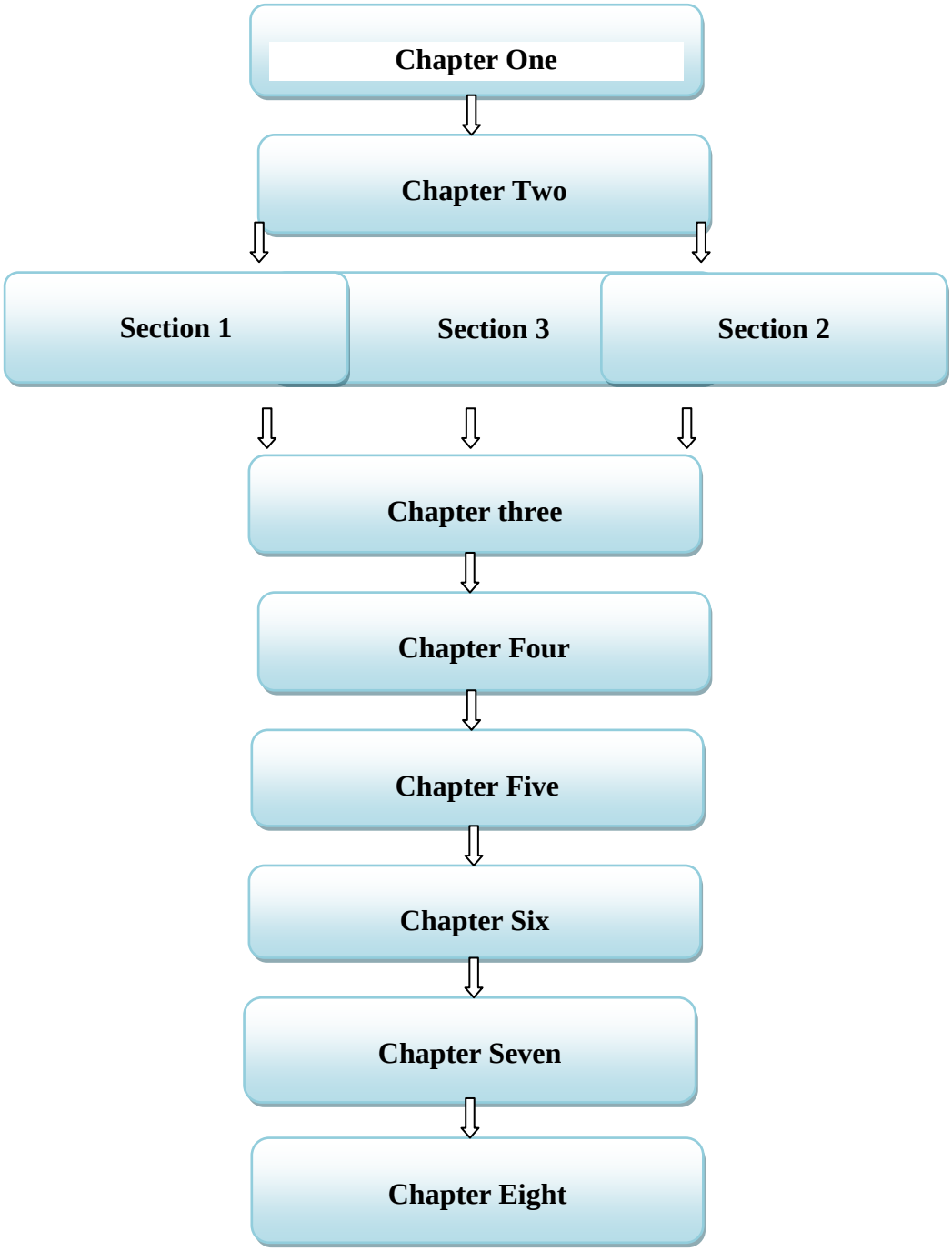

Figure 1.2 Thesis Structure (Author)

Chapter Two: Literature Review

Section 1: Quality and Total Quality Management

2.1.1 Introduction

This chapter aims to provide an overview of the literature on TQM. It presents the fundamental and different issues of TQM that are related to this study. The chapter includes the definition and history of quality, followed by a brief history of TQM and its roots and transition from the concept of quality to TQM, quality gurus and their contributions, models of TQM implementation and quality management approaches.

2.1.2 Definition of Quality

There are many definition of quality; numerous experts have defined quality in different ways that focus in various aspects of the subject.

The British Standard Institutions (BSI) defines quality as "*the totality of features and characteristic of product or services that bear in its ability to satisfy stated or implied needs".*

The American National Standard Institute (ANSI) and the American society for quality control (ASQC) define quality as "*the totality of features and characteristics of a product / service that bears on its ability to satisfy given needs*".

Goetsch (2006) has reported several definitions in a number of different ways from a number of different people and organisations:

- Fitness for purpose or use.
- Performance to the standard expected by the customer. .
- Quality should be aimed at the needs of the consumer, present and future.
- The total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which product and service in use will meet the expectation by customer
- Doing the right thing the first time.

Quality became an issue with the beginning of industrialization period and adoption of new scientific approach to management which was proposed by F.W. Taylor

Mishar (2006) .The quality issues in this time were the responsibility of the workers by using self-checking of quality.

The later stage the demanded for inspection of the product to ensure they meet the standards that been determined before they left the factory, which is be known as (quality control).
In the 1930, Walter, Shewhart of Bell laboratories used statistical process control (SPC) to study variation in the performance of systems.

Edwards Deming, a student of Shewhart, helped engineers and operators in the war years. His effort was not appreciated in his home country, the USA, but he and his ideas were embraced by the Japanese. He considered as the father of statistical quality control. Deming's contributions to the quality are: Deming Cycle, his Fourteen Points and the Seven Deadly Diseases (Goetsch *et al.* 2006).

Juran developed the improvement spiral showing that quality improvement is a continuous process and not just a programme with start and end point.
Feienbaum can consider the originator of the concept of total quality control.
More details about these gurus and their contributions will be presented in Section 2-5
Table 2.1 is a timeline that shows some of the major events in the evolution of the quality since the days of Taylor (the father of scientific management).

Table 2.1 the milestone of Quality management

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(Source; sallies, 1996)

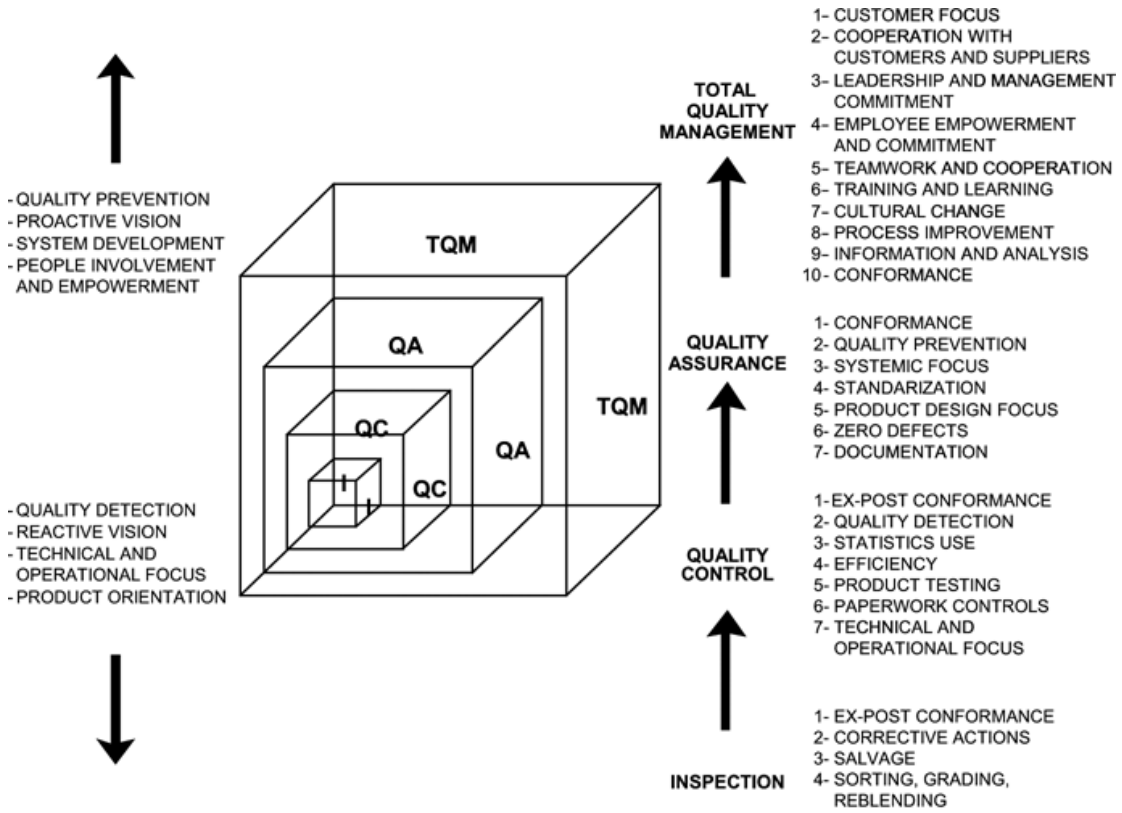
2.1.3 The development of Quality

Systems for improving and managing quality have evolved rabidly in recent years, inspection activities have been replaced by quality control, quality assurance has been developed and refined and many companies now are working towards TQM. In this progression, four fairly discrete stages can be identified (Dale *et al.* 2007):
Inspection, quality control, quality assurance and total quality management. Figure (2.1) shows the four level of quality development including:

2.1.3.1 Inspection

BS EN ISO 9000(2000) define inspection as "*degree to which a set of inherent characteristics fulfils requirements*". Under a simple inspection-based system' one or more characteristics of a product, service or activity are examined, measured, tested, or assessed and compared with specific requirements to assess conformity with a specification or performance standard.

The inspection activity is carried out by dedicated staff employed specifically for the purpose, or by self-inspection of those responsible for a process. Simple inspection-based systems are usually wholly in-house and do not directly involve suppliers or customers in any integrated way.



Source: Adapted from Moreno-Luzon *et al*. (2001) and Dale *et al*. (1999)

Figure 2.1: Evaluation of total quality management, adopted from (Maria D. Moreno Luzon, 2011)

2.1.3.2 Quality control (QC):

The control means "*all necessary activities for achieving, objectives in the long-term, efficiently and economically"* (Lindsay *et al.* 1997). Control, therefore, is doing whatever is needed to achieve what we want to do as an organisation.

The main task of QC is to find in place detailed product and performance specifications, paperwork and procedures control system. With quality control there will have been some development from the basic inspection activity in terms of sophistication of methods and systems, self-inspection by approved operators, use of information and the tools and techniques which are employed (Dale *et al.* 2007).

2.1.3.3 Quality Assurance (QA):

QA is a part of quality management focused on providing confidence that quality requirements will be fulfilled (BS EN ISO 9000 (2000)).

Furthermore, Sallis (2002) states, "*Quality assurance is the responsibility of the workforces, usually working in quality circles or teams, rather than the inspector*". He adds that inspection might play a role in QA is a prevention-based system which improves product and service quality, and increase productivity by focusing on product, service and process design.

Changing from detection to prevention requires not just the use of a set of tools and techniques, but the development of a new operating philosophy and method which requires a change in management style and a way of thinking. This leads to the next level, which is Total Quality Management.

Therefore, the quality assurances stage changed the way from product quality towards system quality in order to give stakeholders confidence about the management of quality and the outcomes achieved. Prevention of quality problems is the core of the quality assurance approach. QA uses planned and systematic activities to enhance prevention of quality problems. These activities include documentation, quality manuals, procedures, work instructions, etc.

2.1.3.4 Total Quality Management (TQM)

TQM has become a part of corporate management on a global scale (Lakhe *et al*. 1994, Melan 1998, Yusof *et al*. 2000), and many organisations have had experiences with working on the transformation towards total quality management and this is coupled with its spread from manufacturing to the service sector and on to public services (Dale *et al*. 2007).

Writers of TQM have attempted to distinguish traditional management approaches and the TQM approach and have consequently shown that TQM introduces its management philosophy and principles in a different way from traditional management philosophy and principles (Martin 1993). Table (2.3) shows a comparison between the two philosophies and principles.

Table 2.2 Comparison between traditional management philosophy and TQM

Traditional management philosophy	TQM philosophy
Organizational communication is primary top-dawn	Organizational communication is top-dawn, dawn-top and sideways.
The Organization has multiple competing goals.	Quality is the primary Organizational goals.
Financial concerns drive the organization	Customer satisfaction drives the organization
Management and professionals determine what the quality is	Customer determines what the quality is
Change is sudden and achieved by champions battling the bureaucracy	Change is continuous and achieved by Teamwork.
Employee and departments compete with each other	Employee and departments co-operate with each other.
Decisions are based on (gut feeling)	Decisions based on data and analysis
The focus on the status quo	The focus on the continuous improvement.
Quality is viewed as inspection for errors after products are produced.	Quality is viewed as prevention the errors with emphasis on quality of design
Short-term focus and result oriented.	Long-term focus and continuous improvement oriented.

(Source: adopted from (Martin, 1993)

2.1.4 Definitions of TQM

TQM remains the subject of great debate as there is no universal definition. It doesn't possess a universal definition (Gehani 1993). Every researcher has their definition to suit their own beliefs, academic and business experience. For example:

Sashkin *et al.* (1993) pointed out that "*TQM means that the organization is defined and supports the constant of customer satisfaction through integrated systems of tools, techniques, and training. It involves the continuous improvement of organizational process, resulting in higher quality products and services*".

Milkovich (1991) asserted "*TQM is an organizational transformation strategy and method of process improvement that achieve quality and productivity without additional resources".*

Hart *et al.* (1992) stressed, "*TQM represents the latest phase in evaluation of the quality discipline".* They believe that TQM offered distinctive features that are stronger and pervasive, such as customer orientation and view toward meaning quality

for competitive advantage. It comprises of quality design, quality control, quality and improvement (Cole 2002).

Madura (2004) wrote with Deming's definition in mind that "*TQM is an act of monitoring and improving the quality of products and service* ".

Kanji (1990) analyse the three words: total, quality, and management. Quality means satisfying customer's requirements continually; Total quality is to achieve quality at low cost; Total quality management aims to obtain total quality by involving everyone's daily commitment

Oakland (2000) suggests that TQM is a continuous quest for excellence that has to reach every individual within an organization in order to make prevention of defects possible and to satisfy customer totally at all times.

Using points of agreement between the writing of the quality gurus, Miller (1996) developed a definition of TQM to serve as a reference for TQM research. He has defined TQM is "*an ongoing process whereby top management takes whatever steps necessary to enable everyone in the organization in the course performing all duties to establish and achieve standards which meet or exceed the needs and expectation of their customers, both external and internal"*.

Shaari *et al.* (2006) stressed "*TQM is the culture of an organization committed to customer satisfaction through continuous improvement, this culture varies both from one country to another and between different industries, but has certain essential principles which can implemented to secure greater market share, increased profits and reduced costs*".

Bounds *et al.* (1994) point out that the TQM is total system approach, and an integral part of high level strategy. It works horizontally across functions and departments, involving all employees, top to bottom, and extend backwards and forwards to include the supply chain and the customer chain.

Venkatrman (2007) cited Corrigan (1995) with a definition which emphasised customer satisfaction. He added that TQM describes two main notions: continues improvement and the tools and techniques methods used.

Besterfield *et al.* 2003 cited in Trehan (2011) Pointed out that TQM is defined as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organisation.

The conclusion from these definitions is that a holistic modern management approach can be implemented by all types of organisation. It is the mutual co-operation of everyone in an organization and associated business processes to produce value- for-money products and services which meet and hopefully exceed the needs and expectations of customers.

Based on the above discussion, TQM can be viewed as a management style that is Errabou (2009) and determined by the customer. It requires that everyone is involved in the process through managers and employees collaborative support in planning and implementation to achieve quality in order to a achieve customer satisfaction.

2.1.5 Benefits of TQM:

Organizations adopting TQM philosophy have gained many benefits:

- Better team work among departments (Michael *et al*. 1997)
- Improved student performance (Kanji *et al*. 1999)
- Better service (Kanji *et al.* 1999, Peters 1999, Morehouse 1996)
- Reduced costs (Kanji *et al.* 1999, Graham 1994, Peters 1999, Tari 2005, Peters 1999, Brocka *et al.* 1992)
- Customer satisfaction (Kanji *et al.* 1999, Arasli 2002, Graham 1994, Willis and Taylor 1999, Peters 1999, Dale *et al*. 1997, Morehouse 1996, Gatiss 1996, Gittow *et al*. 2005)
- Employee satisfaction (Arasli 2002, Michael *et al.* 1997; Dale *et al*. 1997, Gatiss 1996, Ooi K. B. et al. 2007)

- Increased market share (Graham 1994, Brocka *et al.* 1992, Evans *et al.* 2000, Corbett *et al* 2000)
- The creation of an environment to encourage individuals to take responsibility for improvement (Asher 1996)
- A contribution to reshaping organizations at all levels (Zairi 1995)
- Improved customer/supplier relationship (internally & externally).

A study by Radovilski *et al.* (1996) of 235 companies that had implemented TQM revealed increases in profit (21%), market share (9%), and productivity (20%) with reduction in defects (24%) and costs of achieving quality (20%).
In order to describe the benefit of TQM, Crosby (1995), states that: "*Nothing is more important to the prosperity of a developing nation than quality. The only way a developing nation can increase their trade activities and develop in a sustainable way is to improve the quality of their products and services".*

Sterman et al. (1997), argue that in the long run, TQM lowers costs, raises quality, and increases productivity and profitability. This is consistent with the description of Deming (1982) and the results of quality achievement.

2.1.6 TQM Barriers and Pitfalls:

TQM may not contribute significantly to improvement if poorly implemented, Curry *et al.* (2002) mention two pitfalls as a change in the employees and heightened expectations as they wait for some sort of miracle to happen. He refers to the potential for empowerment causing some loss of control.

Radovilski, *et al.* (1996) found major TQM implementation problems with lack of management commitment, poor communication between departments and the perception of TQM as a transient or campaign rather than a real, working system.

Tamimi, *et al.* (1998) identified barriers such as management compensation not been linked to achieving quality goals, best practice of competitors not being benchmarked,

insufficient training in problem identification and problem solving techniques and employee resistance to change.

The most organisations find it hard to install and maintain TQM because of reasons such as : resistance to change in behaviour, habits, and relationships between leaders and employees; lack of conviction that TQM works; the weak organisational performance ethics and challenges; reward of individuals rather than team by organisation, and intrinsic preference for individual over group accountability; most organisations do not understand what quality means and how to measure it (Maital *et al.*1980, Tan 1997). Another drawback to TQM could be the inability to define outcomes and standards in an educational setting, and most people who become involved with TQM expect to see results immediately (Michael *et al.* 1997).
Some of the common mistakes and barriers to be encountere during the implementation process in this kind of organisation are, among others, the inability to change organisational culture, a poor use of data.

Lakhe *et al*. (1994) report that most organisation in the developing countries are suffering from the following barriers to implement TQM:

- Lack of employee involvement and participation in quality improvement effort.
- Lack of management commitment and motivation.
- Traditional belief that "Quality costs money ".
- Lack of communication.
- Lack of established quality standards and inadequate test facilities.
- Low level of education.

Motherly *et al.* (1992) point out the roadblock in implementing of TQM as:

- Lack of participation of managers.
- Limited recourses.
- Work overloads.
- Overlapping of responsibilities of leadership.
- Fear of change.

Apart from commercial cases, the educational sector, such as Oregon State University, has been cited by Coate (1993) that is faced a number of barriers to its TQM implementation, and the barriers were:

(a) the barrier of time – (b) the barrier of language- (c) the barrier of middle management- (d) the barriers of university governance- (e) the barriers of attitude- (f) the barriers in dysfunctional units. Once the barriers have been identified then something can be done to overcome these barriers.

Bank (2000) stated that there are four major obstacles to implementing Deming's philosophy. These major barriers are the lack of constancy, preoccupation with short term profits, the many forms of performance appraisal, the mobility of management and their reliance on only visible figures as criteria for success.

Lack of constancy is Deming's phrase for it. It is indicated by the other writers that there a great changeability in management today shifting from one theory to another with alacrity. The valid aspects of each of the management ideas get invalid because they are applied in a piecemeal way with frequent moves from one idea to another. Lack of management constancy occurs when managers fail to make the cultural or organisational changes required for new ideas to flourish and when managers pay only lip-service to the new idea and push faulty products out of the door when under pressure Bank, (2000).

Vekatraman (2007) summarised the barriers to TQM in higher education, among those barriers were; lack of funds and resources, poor curriculum design and necessary knowledge about TQM in higher education.

Bassem (2008) states that "*Other problems include the organisational culture which remains one of "command and control" and is driven by fear or game-playing, budgets, schedules, or bureaucracy; and the overemphasis on cross-functional teams which leads to neglect individual efforts for local improvements".*

In the Libyan context, Shibani, *et al.* (2012) have concluded that the top two barriers are; lack of benchmarking and employee's resistance to change. In addition, they point out that; continued dependence on traditional incentive schemes, numerical targets, and being unable to provide the right type of training for each and everyone in order for them to be able to do their job properly are other obstacles.

Moreover, study had been conducted by (Shokshok 2011) revealed 4 main factors considered to hinder the successful TQM implementation namely; lack of leadership, lack of finical resources, lack of government; and difficulties change of culture and management.

2.1.7 Requirements of TQM implementation

As mentioned above the TQM is an approach to improve the competitiveness, effectiveness and flexibility of an organisation**.** Whilst it must involve everyone, to be successful, it must start at the top with the leaders of the organisation, as well as some other essential requirements for successful implementation.

Dahlgaard *et al.* (2002), highlights that TQM implementation requires a change in the way in which businesses operate, and contend that there is no standard way for a good TQM programme. Barua *et al.* (2011) point out that TQM implementation requires change in organisational process, cultures and outlook. And he adds that it is necessary to have strong leadership and top management commitment to implement this system

However, the quality gurus provide the core assumptions of the TQM philosophy, and assume that quality is the outcome of all the activities that take place within an organisation. According to some gurus and authors in the TQM field (Crosby, 1979; Dahlgaard *et al.* 2002, Dale 1994b, Deming 1986, Feigenbaum 1983, Garvin 1988, Juran 1995, Oakland 2000/1993, Taguchi 1986, Wilkinson *et al.* 1998, Zairi *et al.* 1994, Hellsten *et al.* 2000, Pheng *et al.* 2004, Monsef 2012), there are some common requirements of TQM implementation including:

- ✓ Top management's direct involvement in the delivery of quality;
- ✓ Management structures have to be more consultative and less hierarchical ;

- ✓ Commitment to TQM must be backed by action, which the employees and the customers can see and experience;
- ✓ Meeting and exceeding customer needs is a clearly stated aim and the highest priority;
- ✓ The organization should establish a long-term commitment to continuous improvement;
- ✓ Commitment to the process must be led by the senior management of the business.
- ✓ TQM requires consistent and accurate performance to high standards in all areas of the organisation.
- ✓ Communication links between workers and management and between the business and all aspects of the supply chain must be excellent.
- ✓ Workers have to be empowered to be able to make decisions at all levels of the organization;
- ✓ Each individual should have the opportunity to participate, contribute and develop a sense of ownership, eliminate barriers between departments, and eliminate fear.

2.1.8 Gurus of TQM

There are many experts, writers, educators, and consultants who have written about TQM and its concepts. However, there are some particular writers who are well-known specialists in the field of TQM and their contribution is tangible. In particular, there are four experts on quality, who have made a great contribution to the development of TQM and its methods and concepts, these are: W. Edward Deming, Armand V. Feigenbaum, Joseph M. Juran, Philip B. Crosby, and the following sections present these theorists' approaches.

2.1.8.1 Deming (1900-1993)

W. Edwards Deming is considered as the father of statistical quality control (Dale *et al*. 2007). Deming's main argument was that by improving quality it is possible to increase productivity and this will improve organisation competitiveness.

Bank, (2000) stated that there are four most important obstacles to implementing Deming's philosophy. They are the lack of constancy, worry about short term profits, the many forms of performance appraisal, the mobility of management and their reliance on only visible figures as criteria for success. Figure (2.3) demonstrate those obstacles.

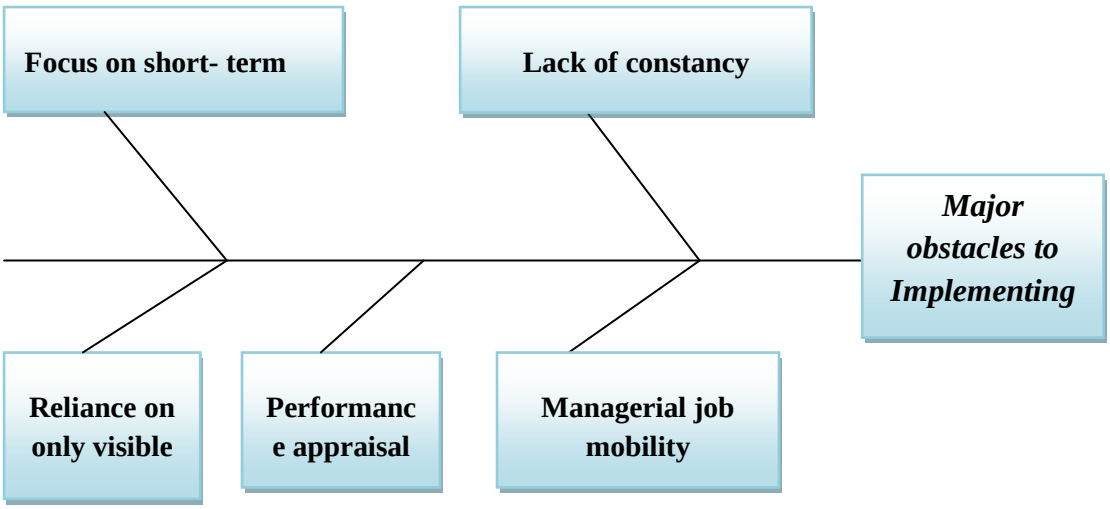


Figure 2.2 the main obstacles for implementing Deming's points. (Twaissi, et al.,2008).

Deming's view was that quality management and improvement are the responsibility of the all firm's employee: top management must adopt the 'new meaning' of quality, lead the driver for improvement and be involved in all stages of the process (Dale et al 2007).

Redmond *et al.* (2008) have reported that an important practical component of Deming's philosophy is his 14-principles for transforming a service quality including:

1- Create constancy of purpose for improvement.
   - Innovation
   - Research and education
   - Continuous improvement of products and services.
   - Maintenance of equipment.

2- Adopt the new philosophy
   i. Transformation of management.

3- Cease dependence on mass inspection
   i. Inspection process and is costly and ineffective.

ii. The old way: inspect bad quality out. The new way: Build good quality in.
iii. Quality comes not from inspection, but from improvement of the process.

4- End the practice of awarding business on price tag alone

i. Leads to proliferation of suppliers.
ii. Buyers jump from one supplier to another
iii. Price has no meaning without a measure of the quality being purchased

5- Improve constantly and forever the system of production and service

i. Improve is not one-time effort
ii. Teamwork is essential to the process.
iii. Management must lead the way

6- Institute training

i. Provide training by knowledgeable individual. It is difficult to erase improper training.
ii. Provide training until outputs reaches stable stage.

7- Institute leadership

i. Leadership is the job of the management.

8- Drive out fear.

i. Not afraid to express idea. Not afraid to ask question.
ii. Fear will disappear as management improves.

9- Break down barriers between staff areas

i. Conflicting goals between departments can rain the overall organisational goals.
ii. Teamwork requirements.

10- Eliminate slogans, exhortation and targets for the workplace

i. Slogans implicitly suppose the employee could do better if they tried harder.

11- Eliminate numerical quotas

i. Quotas impede quality perhaps more than single working condition

12- Remove barriers to pride of workmanship

i. Increase the employee involvement.
ii. Increase communication.

13- Institute a vigorous programme of training and education.

i. Management must stress that no jobs will be lost due to the productivity improvements.
ii. Need to provide new knowledge and skills to deal with new materials and new system.
iii. Education and Training are investment in people.
iv. Required for long-term planning.

14- Take action to accomplish transformation

i. Management must organise itself as a team.
ii. Follow the cycle: Plan, Do ,check and Act

Deming stresses that the basic cause of industrial quality problems, was the lack of planning encountered senior management, while they controlled the resources available to the company and through their policies had the major impact on its culture (Sallis 2002).

2.1.8.2 Feigenbaum(1992)

Armand V. Feigenbaum is the originator of the term 'total quality control', and he said that management must commitment to:

- Strengthening the quality improvement process itself.
- Making sure that quality improvement becomes a habit.
- Managing quality and cost as complementary objectives.

He did identify 10 benchmarks for success with TQM:

- Quality is a company- wide process.
- Quality is what the customer says it is.
- Quality and cost are the sum, not a difference.
- Quality requires both individual and team zealotry.
- Quality of a way of managing.
- Quality and innovation are mutually dependent.
- Quality is an ethic.
- Quality is requires continuous improvement.
- Quality is the most cost-effective, least capital-intensive route to productivity.
- Quality is implemented with a total system connected with customers and suppliers.

In additions, Feigenbaum set up four basic quality premises (Lewis& Smith 1994):

1- Total quality begins with customer requirements and ends with customer satisfaction.
2- Documentation is a necessary part of communicating work assignments.
3- The quality system is a flexible system because of the alternatives designed in the system.
4- When the entire system is re-engineered, greater strides in quality improvements can take place.

2.1.8.3 Joseph Juran

He is another pioneer of sound quality management practice. The Juran Trilogy indentifies three areas of quality conversion namely (Rao, *et al.* 1996):

- ✓ Quality planning: the process of preparing to meet quality goals.
- ✓ Quality control: the process of meeting quality goals during operations through evaluation of performance and taking corrective action.
- ✓ Quality improvement: the process of breaking through unprecedented levels of performance by reducing waste, improving delivery, enhancing employee satisfaction, ensuring greater customer satisfaction, and so on.

According to (Beckford 2002) Juran's philosophy can be summarised into five key beliefs

* management is largely responsible for quality ;
* quality can only be improved through planning;
* plans and objectives must be specific and measurable;
* training is essential and starts at the top and
* three- step process of planning, control and action is needed.

Appendix (F) gives more details about the six steps of Juran for problem solving.

2.1.8.4 Philip Crosby

The philosophy of Crosby focused on reducing cost through quality improvement and stressed that both high and low- end products can have high quality. He is famous for the concept of "do it right first time" (Bendell *et al.* 1995).

Owen (2002) summarised Crosby's philosophy as "quality is free" and that goals of any system should be zero defects. His philosophy can be found in his four absolutes

of quality management: quality is defined as conformance to requirements; quality is achieved by prevention rather than inspection; quality standard should be zero defects and the measurement of quality is the price of non-conformance. Crosby is famous for his fourteen principles of continuous quality improvement through which a total quality culture could be developed. See Appendix (G).

Despite the differences among these experts, a number of common ideas arise namely:

- inspection is never the answer of quality improvement;
- Involvement of top management is essential to the necessary culture of commitment to quality;
- Quality is a system of continues improvement;
- The benefits of quality is be more important than the cost of quality;
- A long-term commitment and quality efforts need investment in training;
- Their concepts are equally a applicable to the services and manufacturing industry.

2.1.9 Total Quality Management Tools and Techniques:

To facilitate the implementation of TQM, it needs a number of tools developed for management and employees to carry out the outlined functions more effectively.
These include techniques for problem formulation and analysis, for data collection and analysis, and developing and testing new solutions (Bergman et al. 1994).
TQM emphasises the importance of tools and techniques in analysing and interpreting the data required for a continuous improvement process; therefore right decisions could be based on reliable data and information (BS 7850, 1992). Tools and techniques are practical methods, skills, means or mechanisms that can be applied to particular tasks. Among other things they are used to facilitate positive change and improvements. A single tool may be described as a device which has a clear role. It is often narrow in focus and is usually used on its own (R. E. McQuate *et al.* 1995).
Today there are more than a hundred different tools available, whoever, seven quality tools (7QC) are more common, and they are easy to learn and to handle and are used

to analyze solutions to existing problems . Sometimes workers use only one tool at a time, but often a combination of tools is most helpful.

2.1.9.1 Cause & Effect Diagram

Also known as fishbone or Ishikawa Diagram, it is useful technique for opening up thinking in problem solving. It structured from in which brainstorming graphically shows the relationship of possible causes and sub causes directly related to an identified effect/problem (Raj 2011).

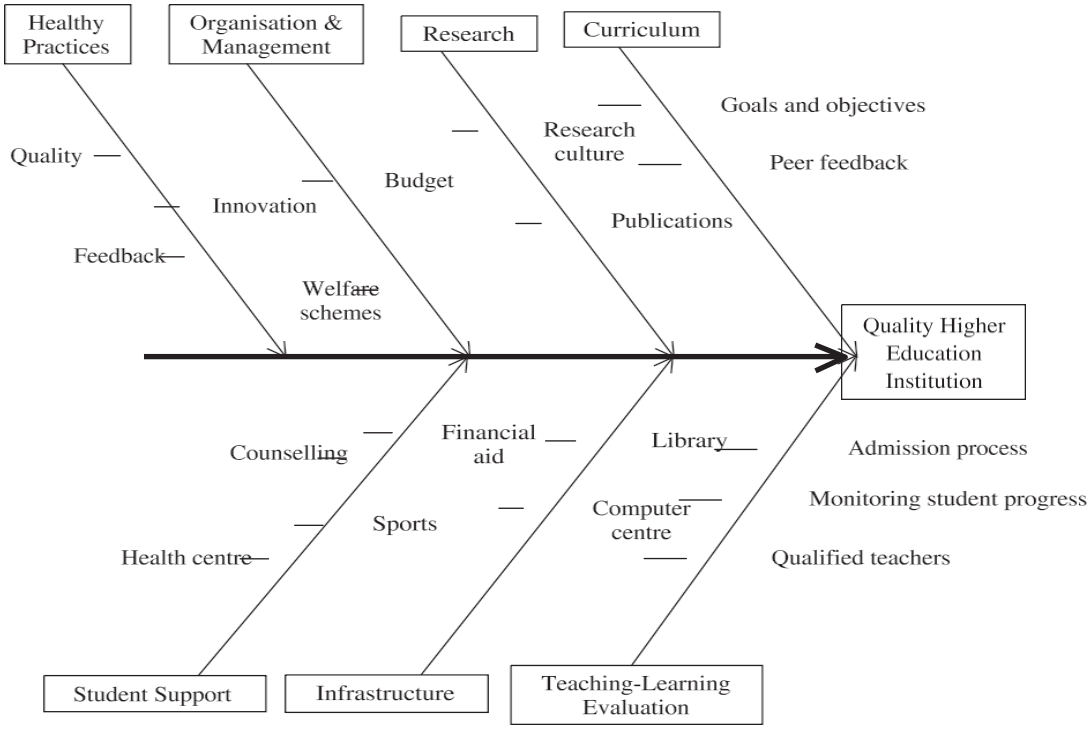


Figure 2.3 cause and effect diagram adopted from (Mishra, 2007)

2.1.9.2 Control Charts

A control chart shows the sequential or time-related performance of a process and is used to determine when the process operating in or out of statistical control- using upper and lower limits defined on the chart (Steyn 2000). The control charts have some features:

- Good way to show data over time.
- Collect data over time. Look for the average.

- Consider the moving average for rapidly changing results.
- Set control limits for upper and lower boundaries.
- Look for “out of control” patterns. Points outside control limits, runs up or down, points always under or over the average value.
- Control charts let you look forward rather than backward. Prevention is better than detection.

2.1.9.3 Histograms:

A histogram is a bar (column) graph showing the frequency of distribution of data collected on a given variable.

- Get lots of numbers in an easily understood visual form**.**
- Group the numbers into cells or ranges.
- Plot to give a histogram, look for the average and the shape (distribution).

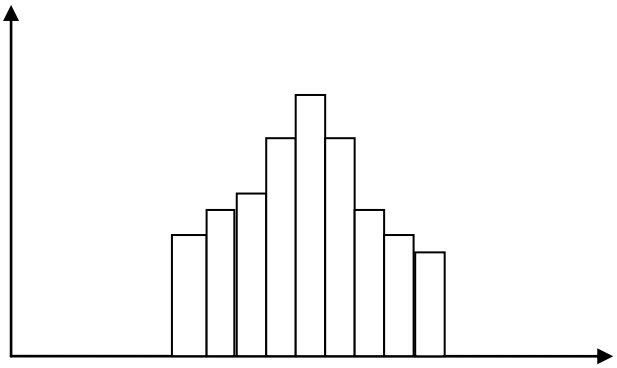


Figure 2.4 Histogram

2.1.9.4 Flow Charts

Flow chart is a graphic representation of a process which details the sequencing of materials, work activities, operations and decisions that make up the process (Swift *et al.* 1998).

- Map the actual process.
- Find the decision points and areas of confusion.
- Improve the process to meet the ideal.

Figure 2.5 Flowcharts (Mishra, 2007)

Dale *et al.* (1999) indicated that quality tool and techniques should be used to facilitate improvement and be integrated with business processes. They stated:

"*The use of techniques and tools help to get the process of improvement started: employees using them to feel that they are involved and making a contribution; quality awareness is enhanced; behaviour and attitude change starts to happen; and projects are brought to a successful conclusion*".

Furthermore, various measurements have to be carried out in order to assess the true effectiveness of TQM in the whole business system, however, TQM tools and techniques are efficient methods of findings out if customer needs are met both internally and externally (BS 7850,1992). Sallis (2002) emphasises that it is important to find right tools and techniques for the job, and offer appropriate training for staff in their proper use. Sallis adds that effective training and practicing of quality tools and techniques could lead to develop and enhance efficient decision-making culture in the institution.

2.1.10 TQM and Organisational Culture

It is everything that people have and think, as a member of a society (Ferraro 2002 cited in Tsoukatos *et al.* 2007). It consists of the beliefs, values, norms, customs and practices of the organization (Rad 2006). In addition, Taormina (2008) defines the organizational culture as the attitudes, values, beliefs and behaviours that are shared by a particular group of people.

Moreover, the implementation of TQM and main components does not take place in vacuum. It directly influenced by organizational culture (Zeitz 1997, jabnoun 2001, Hyland 2000). So, Organisational change often requires cultural change to achieve a flexible, dynamic, and adaptable environment, where all organisation members participate in problem solving, value adding results and corporate success (Morgan, 1997). This is where Total Quality Management makes an impact. However, in order to implement TQM successfully, many attitudes need change, thinking developed and perceptions broadened.

Additionally, starting a quality improvement program without a good understanding of the organisational and its ability and willingness to support such a program will lead to barriers that may produce failure. As a result standards can be set and organisation-wide commitment and continuous improvement realised. The necessary changes will not happen without planned. The leaders need to understand to affect change and achieve desired results (Schein 2004).

According to Ciampa (1991), management must put in place ways to promote including:

- A belief that the employer has the right and the responsibility to improve his or her immediate surroundings;
- A sense of ownership in the product or service delivered to the customer;
- The ability of the people, and thought them, the systems, to innovate and to create something new that adds value;
- A feeling of co-dependence;
- The desire to change and to improve what currently exists; and

- Commitment to a commonly-held vision of the sort of organization that could be.

Thus, there have been numerous studies investigating the relationship between TQM and culture (Jabnoun 2001, zeitz 1997, Kumar *et al.* 2007) ,and much have been written about the transformation of organizational culture that is required to obtain full benefit from the adoption of quality management principles (Narasimhan, 1996, Jabnoun 2005).

While the influence of corporate culture on the success of TQM program has been highlighted by a number of authors, it has also been argued that TQM implementation leads to change in organizational culture (Jabnoun 2005). As the same time as an adequate culture must be present to effectively implement TQM, some TQM programs, such as training and employees' involvement and empowerment, do explicitly modify culture(Jabnoun 2005). Deming also has said that TQM is a management philosophy that requires a radical cultural change from traditional management to continuous improvement management (Kumar 2005).
It is not therefore a surprise that the literature on total quality management has included leadership and culture as factors critical to the success of TQM initiatives (Buch *et al*. 2001).

Goestsch *et al.* (2006) has reported that organisations that develop and maintain in quality culture will differ significantly from these with traditional culture in:

1. Operating Philosophy: in an organisation culture the core of the operating is customer satisfaction, and has fewer turnovers at the top management. These is because such a philosophy encourages the decision makers to stay in their positions long enough to either enjoy or suffer the consequences of their decision. In turn in an organization with a traditional culture the primary focus is return on investment and short term profits. In this organizations with such philosophy often experience so many turnovers at the top.
2. Objectives: organisations with traditional cultures typically adopt short-time objectives. The focus is on what will be achieved in several weeks and months. Organisations which adopt quality culture developing both long and

short term objectives, and they do so within the context of an organisation vision.

3. Management approach: organisations with traditional cultures, management think and employee do, in they do what they are told. Mangers are seen as (bosses) who gives orders and enforce policies, procedures, and rules. Organisations with quality cultures, mangers are seen as coaches of the team. They communicate the vision, mission, and goals: provide recourses: remove barriers: seek employee input and feed-back: build trust: provide training: and reward and recognize performance.
4. Attitude toward customers: organisations with traditional cultures tend to look inward. They are more concerned about their needs than those of customers. An organisation with quality cultures, customer satisfaction is the highest priority and is the primary motivation driving continual improvement effort.
5. Problem- solving approach: organisations with traditional cultures, when problems occur, decision makers and employees tend to expend more energy on deflecting the root cause of the problem. Moreover decision makers hold back until someone appears to have problem almost solved; then jump on board and act as if the idea was theirs as along. Such approach encourages manipulation and subterfuge rather than innovation and creative thinking. When difficulties occur in organisations with quality culture, the focus is on identifying and isolating the root cause of problem, and solving the problems is typically a systematic process undertaken by teams.
6. Performance-improvement Approach: An organisation with traditional cultures, performance improvement is an erratic, reactive undertaken that is typically triggered by problems. Organisations with quality culture, continual improvement of processes, people, product, the working environment, and every other factors that affects performance is at very core of the operating philosophy.

It is worth to notice that the cultural change is not easy to achieve in organisation, leaders interested in changing their culture need to understand what effect the history

of the organisation had on the culture and also have a good working understanding of current capabilities (Schein 2004).

Based on the above, a culture assessment is an organised approach to learning about an institution's culture. When the top management wants to introduce a change in focus, the culture assessment provides information about the culture and its willingness to accept and support the change.

2.1.11 Summary

This section of literature review discussed the quality and TQM in general includes the fundamental and different issues of TQM. The definition and concept of quality were discussed in addition to the development of quality from inspection period to quality control and quality assurance then to the TQM philosophy. The definition of TQM and comparison between traditional management and TQM philosophy were presented. Furthermore, this section presented the review of TQM' benefits and obstacles to implement it successfully.

In the next section, TQM in service sector will be discussed to provide a considerable picture of quality in Higher Education (HE).

Section 2: Total Quality Management in Service Sector

2.2.1 Introduction

This section presents a literature review of TQM in service sector in general, and higher education in particular. As mentioned earlier, the management approach started in manufacturing and business and then extended over the service sector. Research shows that by adapting aspects of the TQM to fit their own needs, education organizations experienced a better ability to manage the process of quality, and maintain and enhance development. Vazzana *et al.* (2000) in their study about TQM in business colleges found that most institutions benefit from their attempt at using TQM to improve the quality of their institutions.

The present section is about how TQM has, and can be, conceptualized in an education system, what benefits education can get from implementing TQM, concerns about implementing TQM in education, and case studies of some educational institutions which have implemented TQM and what problems and benefits have been encountered in this context.

2.2.2 Differences Between Manufacturing and Service Organisations

The last two decades have witnessed the increased acceptance and use of quality in the service sector (Sahney *et al.* 2006). Besides the popularity of TQM in manufacturing companies, Service organizations cover a broad spectrum such as public utility services; educational institutions; hospitals; banks and insurance companies; travel and tourist agencies; public information bureaux; police and fire services; hotels; restaurants and transportation companies, etc (Mohanty *et al.* 1996)

A full understanding of the difference between service and manufacturing is highly desirable for successful implementation of TQM in the service sector**.**

Mohanty (1996) point out that in order to implement TQM effectively in service organisations requires an understanding of the

- Unique characteristics of service operations;
- Roles of service providers and service clients;
- Application of appropriate quality control concepts, tools and techniques.

Many studies (Dochhin, *et al.* 1994, Macdonald 1994, Alshammri 1997, and Akbar 2009) have discussed differences between services and goods. These differences can be articulated as: the customer receives a tangible product in the form of goods which can be seen, touched and have style, hardness, colure, size, label, etc, and it remains with him, goods can be purchased to store in inventory to satisfy the customer's demand. The services are intangible, consumed at the moment of delivery, and cannot be stored, but should be available to consumer demand. The quality of services is more dependent on subjective expectation and perception.

In addition, Kawamura (2005) summarised the characteristics of service quality to:

- Human service products in invisible.
- Storage or reproduction cannot be secured.
- Required to take a proper measure as the occasion demands.
- Production and consumption or uses are made at the same time and same space.
- Service product is evaluated directly.
- Customers are more involved in production process than manufacturing goods.

Table 2.3 Dimensions of Quality for Manufacturing versus Service Organizations

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Based on above, service organizations produce a product that is intangible, and the complete product can not been seen or touched. Rather, it is experienced.
Examples include delivery of health care, experience of staying at a vacation resort, and learning at a university. The intangible nature of the product makes defining

quality difficult. Also, since a service is experienced, perceptions can be highly subjective.

In addition to tangible factors, quality of services is often defined by perceptual factors. These include responsiveness to customer needs, *courtesy* and *friendliness* of staff, *promptness* in resolving complaints, and *atmosphere.* Other definitions of quality in services include *time*—the amount of time a customer has to wait for the service; and *consistency*—the degree to which the service is the same each time. For these reasons, defining quality in services can be especially challenging.

2.2.3 Higher Education Sector

Higher education is the backbone of any society. The quality of higher education decides the quality of human resourses in a country.

As a result of operating in a global marketplace, institutions of higher education compete for both scarce resources and research funds. Alongside this "globalisation" and saturated market is the increasing emphasis placed on the concept of quality and its impact on the providers of higher education programmes (Anderson 2004).

The most widely used quality improvements methodologies from industry are examined in the context of higher education include: Total Quality Management (TQM); Quality Function Deployment (QFD); Six Sigma; ISO 9001; and the Malcolm Baldrige National Quality Award. TQM was found to have the largest number of historical applications in higher education (Anita *et al.* 2009).

2.2.3.1 Concept of Higher Education:

Establishment of universities and colleges has become one of the main goals of the developing countries governments, with a main objective of enabling people to educate, qualify, and meet labour market's requirements. The advancement of knowledge and the information technology revaluation lead the role of HE changing from teaching and learning only to include research and service processes because of the changing demands of society.

Costin (1999) conceptualises education as "*the system in which inputs (students, teachers, classrooms, educational materials, etc.), through the mediation of critical processes (learning and teaching), become outcomes (students with specific skills,*

measurable knowledge, etc. and more broadly defined outcomes (an educated, productive workforce)". He stated that quality in education can be interpreted as "learning from experience (the fundamental notion underlying the (P-D-C/S-A model) and process improvement" and can be achieved by improving critical processes of the educational system.

Mishra (2006) defines the higher education as "*Higher education imparts in-depth knowledge and understanding so as to advance the student to new frontiers of knowledge in different walks of life. It develops the student's ability to question and seek truth and makes him/her to critique on contemporary issues*".

According to (Barnet (1992) cited in Mishra (2006) there are four concepts of higher education:

1- Higher education as the production of qualified human resources. It is seen as process in which the students are counted as (products) absorbed in the labour market. Thus, higher education becomes input to the growth and development of business and industry.
2- Higher education as training for a research career. In this view, higher education is preparation for qualified scientists and researchers who would continuously develop the frontiers of knowledge. Quality within this viewpoint is more about research publications.
3- Higher education as the efficient management of teaching provision. Many strongly believe that teaching is the core of education institutions. Thus, higher education institutions focus on efficient management of teaching-learning provisions by improving the quality of teaching, enabling a higher completion rate among the students.
4- Higher education as a matter of extending life chance, In this view, higher education is seen as an opportunity to participate in the development process of the individual through a flexible continuing education mode.

Additionally, the UNESCO World Conference on Higher Education (UNESCO 1998) defined the mission of a HE system is *"to educate, to train, to undertake research and, in particular, to contribute to the sustainable development and improvement of*

society as a whole". Also, on its website, UNESCO has emphasised the importance of higher education to sustainable development as follows:

"Higher education has a vital role to play in shaping the way in which future generations learn to cope with the complexities of sustainable development. Universities and higher education institutions educate highly qualified graduates and responsible citizens able to meet the needs of all sectors of human activity; they provide opportunities for higher learning and for learning throughout life; they advance, create and disseminate knowledge through research and provide, as part of their service to the community, relevant expertise to assist societies in cultural, social and economic development; they help understand, interpret, preserve, enhance, promote and disseminate national and regional, international and historic cultures in a context of cultural pluralism and diversity; they help protect and enhance societal values by training young people in the values which form the basis of democratic citizenship; they contribute to the development and improvement of education at all levels, including through the training of teachers."

Moreover, the world conference of higher education (UNESCO, Paris, 5-8 July 2009) has concluded the social responsibility of higher education as:

- Higher Education as a public good is the responsibility of all stakeholders, especially governments.
- Faced with the complexity of current and future global challenges, higher education has the social responsibility to advance our understanding of multifaceted issues, which involve social, economic, scientific and cultural dimensions and our ability to respond to them.
- Higher education institutions, through their core functions (research, teaching and service to the community) carried out in the context of institutional autonomy and academic freedom, should increase their focus and promote critical thinking and active citizenship. This would contribute to sustainable development, peace, wellbeing and the realization of human rights, including gender equity.
- Higher education must not only give solid skills for the present and future world but must also contribute to the education of ethical citizens committed

to the construction of peace, the defence of human rights and the values of democracy.

- There is need for greater information, openness and transparency regarding the different missions and performance of individual institutions.
- Autonomy is a necessary requirement for fulfilling institutional missions through quality, relevance, efficiency, transparency and social responsibility.

According to (Chapman 2007) Higher Education contributes to national development in three principal ways: (1) Higher education institutions prepare the primary and secondary teachers that shape the dimensions and quality of the overall education system of each country. (2) They train the high level technical and administrative personnel needed in government, business, and industry. And, (3) HEIs operate as incubators of innovation and creative thinking needed for an economically competitive society.

On the other hand, the World Bank report (2000) states that the developing countries need higher education to:

- ✓ provide increasing numbers of students, especially those from disadvantaged backgrounds, with specialized skills, because specialists are increasingly in demand in all sectors of the world economy;
- ✓ produce a body of students with a general education that encourages flexibility and innovation, thus allowing the continual renewal of economic and social structures relevant to a fast-changing world;
- ✓ teach students not just what is currently known, but also how to keep their knowledge up to date, so that they will be able to refresh their skills as the economic environment changes; and
- ✓ Increase the amount and quality of in-country research, thus allowing the developing world to select, absorb, and create new knowledge more efficiently and rapidly than it currently does.

2.2.3.2 Higher Education Sector and TQM

The definition of quality in higher education is complex and oblique as described by Tsinidou, *et al.* (2010):

"A number of different definitions have been given concerning quality in Higher Education, each one representing a different view, including: exceptional, perfection, as fitness for purpose, value for money, the stakeholder perspective of quality, degree to which the previously set objectives are met ".

According to (Assani 2005) quality in HE is a multidimensional concept, which includes all related function and activities that form the part of academic life in a university system. Therefore, any framework for assessment of quality should take into account the quality of students, teachers, infrastructure student support services, curricula assessment and resources.

Additionally, UNESCO (1998) stated that:
"Quality in higher education is a multidimensional concept, which should embrace all its functions and activities: teaching and academic programmes, research and scholarship, staffing, students, infrastructure and academic environment. Particular attention should be paid to the advancement of knowledge through research".
Thomson (2008) point out that the quality of higher education can be defined as:

- ✓ Quality as exceptional - Traditional notion of quality referring to exceedingly good standards and results. This is notion of quality is often based on reputation.
- ✓ Quality as perfection or consistency – Refers to few defects according to ascertain standard. It also measures output indicators such as student performance in school through graduation rates, acquisition of jobs after graduation, among others.
- ✓ Quality as fitness for purpose – This can mean, first, meeting customer (i.e. student) requirements or expectations or secondly, fulfilling or satisfying institutional objectives or missions.
- ✓ Quality as value for money – Refers to cost effective and efficient operations. This is often a criteria used by UN and World Bank to ascertain rates of return as well as measure quality of education.

- ✓ Quality as transformation – This last conception of quality refers to the empowerment and enhancement of the student, an added value – qualitative changes in the student.

Although educational institutions have been slower to see the value of TQM, many of them are now using TQM to improve their administration and to face internal and external challenges.

The review of the literature has revealed that many studies have been done in this field around the world; for example:

Solank1 (2004) concluded that the Quality Education is all about systems that lead to good academic culture, excellent academic result, progressive and adaptive management, clear and transparent administration, prominent profile of outgoing students, and, above all, review and modification of inputs. All stakeholders have a prominent role to play. He added that TQM must be tried in colleges/Universities for maximum performance of the students and the employees.

Ngware *et.al*. (2006) examines the extent to which secondary schools in Kenya practiced aspects of Total Quality Management. They found that most schools are not committed to strategy quality planning, although they do promote human resource development initiatives.

Osseo-Asare *et al.* (2002) proposed a model for TQM implementation in higher educational institutions. Their model consists of criteria which affect performance and help organisations achieve organisational excellence. These criteria are leadership, policy and strategy, people management, resources and partnerships and processes.

Solanki (2004) pointed that the TQM in higher education believes in:

- ✓ There are no workers and no managers; all employees of an educational institution have important roles to play. The role of each one is important. The team can never succeed unless everyone puts into his/her best.
- ✓ TQM requires a new set of values. There should be openness, transparency, trust, patience, respect and discipline. There is a need for long-term thinking

and emphasis on long-term objective. The system of punishments and rewards is to remain open to every body's evaluation.

- ✓ Involvement, and not just participation in management. Involvement means participation plus commitment and pride. This requires both empowerment of the employees and control also and when their actions go beyond addressing the institutional needs and objectives.

Al-Taraneh (2011) investigates the implementation of TQM on higher education sector in Jordan. He states that TQM can be applied to higher education, but it must be modified to fully recognise some unique aspects of education.

Sabet *et al.* (2012) study the TQM in higher education industry in Malaysia. They concluded that TQM can be implemented successfully in HE which all lectures were committed to use it as a way to quality improvement.

Al-Amri *et al*. (2012) measures the TQM in the Yemeni Universities overall from the standpoint of the faculty members. He finds that there is a weak possibility of applying TQM in these universities. He concludes that realising of TQM principles takes time and effort and requires full commitment of all members in the organization. Some other studies present the result of TQM implementation in educational organisation.

Anderson (1995) reported the results of a case study to evaluate the effectiveness of a TQM programme at the University of Houston (College of Business Administration). She found that the implementation of TQM had some positive results such as increasing the student perceptions of service quality.

Alsuhaimi (2012) explores the implementation of TQM and its practices in the King Saud University. He finds that the implementation of TQM practices enhance the value of the faculty and leading to better performance.

2.2.3.3 Dimensions of Quality in Higher Education

The higher education institutions have a great number of customers groups as presented in this section. These customers have different requirements, complementary or contradictory among themselves. Thus, the quality of higher education is very important for everyone, and it should be discussed from the perspective of all the customers.

Mishra (2007) has grouped the dimensions of quality in higher education into three namely: Product, software and service.

- **Product Quality Dimension**

Source Gravin (1987) cited in Mishra (2007)

- **Software Quality Dimensions**

Table 2.5 software dimensions in quality of higher education

These tsbles have been removed

Source (Owlia *et al*. 1996).

- **Service Quality Dimensions in Higher Education**

Table below shows a comprehensive list of service quality dimensions together with proposed interpretations for a higher education environment.

(Source, Mishra 2007)

Moreover, Kaur (2012) point out that the TQM components in higher education including:

- ✓ Admission; the faculty should decide how a student is selected to a particular programme.
- ✓ **Curriculum design**; the curriculum design of any educational programmes should be dynamic and should be static. While constructing the curriculum for any education programme the basic contributory factors should be pondered namely, nature of human development, learning, knowledge and social forces must necessarily be considered.
- ✓ **Curriculum implementation**; designing and implementation of suitable curriculum are also crucial issue of in the field of TQM.
- ✓ **Evaluation**; Evaluation should generally be carried out by qualified by instructional personals and evaluation reports should be made available to the administrative officer, vice- chancellor.This helps in identifying the strengths and weakness of the programmes and also of the managerial skills that have important implications for modification of both short term goals and procedures of planning.
- ➢ **Employability;** Demand of the world of work employability refers to a person's capability of gaining initial employment, maintaining employment, and obtaining new employment if required. Employability is a union of several skills, abilities, knowledge, competences and capabilities that enable individuals to get employment and be successful in their professional careers. It helps them individually as well as institutionally.

2.2.3.4 Higher Education's Interest in TQM

Higher education sector became interested in TQM because of several challenges facing colleges and universities including: increasing operational costs, tuition increasing, changing student demographic, increase in technology costs, and employer demands for better-prepared graduates. Entner (1993) cited reasons for the need for

TQM principles in higher education including: diminishing resources and increasing public pressure for accountability.

Salameh .S. R *et al.* (2011) point out that the adoption of TQM in higher education has many reasons and motives including:-

- ✓ **Costs:**

A low level of spending in higher education makes colleges and universities seek control of cost. (TQM) is a mean of tools and principles to control costs during service. Expenditure on education is increased, and must be linked to benefit return which is to undertake the role of actual developmental contribute to the advancement of civilization through the quality of performance.

- ✓ **Competition**:

The HEIs have a strong competition as each institution seeks to attract the largest possible number of students through compliance with international standards. HEI's should be distinctive by meeting the best needs for students and society. The adoption of (TQM) enhances credibility to meet the requirements of the College's performance which leads to improve its competitive position among other similar academic institutions.

- ✓ **Government aspiration**

Governments are keen to assess the quality of higher education more than ever and trying to apply quality and reliability more widely to develop the society .Thus, HE comes under a lot of pressure from various stakeholders like students, governments, businesses, and the society as a whole. Such pressures translate into reasons for popularity of the quality concern in HE and drive the adoption of TQM in HEIs.

Moreover, the nature of universities has witnessed changes, since they became very much places where people come to obtain the qualifications that will get them a good job rather than places of highest academic thought (Flores-Molina 2011). He added that there is no relation between the subject of the degree and the type of job that could be obtained by many graduates. Therefore, HEIs should consider the needs of employers, who seek skilled and well-trained people. This leads colleges and universities to emphasise the quality of their graduates and services in order to satisfy their stakeholders, societies and marketplace.

2.2.3.5 Quality Assurance *(QA)* in HE

Quality assurance refers to review procedure undertaken by HEIs that are designed to:

- ✓ Safeguard academic standards and
- ✓ Promote learning opportunities for acceptable quality for students.

For example, the National Union of Students in Europe (ESIB) gives some related definitions include:

Quality Assurance: the means by which institutions can guarantee with confidence and certainty, that the standards and quality of its education provision are being maintained and enhanced.

Quality Assessment: Quality Assessment is the process of external evaluation undertaken by an external body of the quality of educational provisions in institutions, in particular the quality of the student experience.

Quality Audit: Quality Audit is the process of examining institutional procedures for assuring quality and standards and whether the arrangements are implemented effectively and achieve stated objectives. The underlying purpose of Continuation Audit is *"to establish the extent to which institutions are discharging effectively their responsibilities for the standards of awards granted in their name and for the quality of education provided to enable students to attain standards."*

Accreditation: Accreditation is the result of a review of an education program or institution following certain quality standards agreed on beforehand. It's a kind of recognition that a program or institution fulfils certain standards.

Different countries have evolved QA models for their HE system as necessitated by their unique national context. However, there is a common activities related to the quality assurance around the world. Thus examples from different countries would help to clear standing of QA in education context, For example:

- **USA**

There is no federal agency or body to control the American higher education, nevertheless, QA in higher education is done through the accreditation processes which assure that education provider meet and maintain standards of quality in academic, administration and related services.

The Council for Higher Education Accreditation CHEA was created in 1997 which is now carrying out the recognition functions. So, the main aim of (CHEA) is the accreditation which is (CHEA, website):

* A highly successful example of an effective public-private partnership.
* A highly successful and well-tested system of quality assurance and quality improvement.
* *An outstanding example of an effective public-private partnership.*
* *An outstanding example of reliable and responsible self-regulation*

- **UK**

The Quality Assurance Agency (QAA) is the centralized independent body in the UK. The mission of this agency as it stated in its web site is (*our mission is to safeguard standards and improve the quality of UK higher education*).

The quality assurance is done through institutional audit and subject reviews. The institutional audits ensure the HEIs are:

* Providing a wards and qualifications of an acceptable quality and an appropriate academic standards and
* Exercising their legal powers to award degrees in proper manner (where relevant).

The whole exercise is based on the code of practice for the Assurance of academic quality and standards in higher education, the code has 10 sections including:

Students with disabilities- external examining- academic appeals and student complaints – assessment of students- programme approval and monitoring and review- career education- information and guidance- placement learning- recruitments and admission.

The purpose of the quality code is to

- safeguard the academic standards of UK higher education;
- To assure the quality of learning opportunities the UK higher education offers to students;
- To promote continues & systematic improvement in UK higher education, and
- To ensure that the information about UK is publicly available.

- **Australia**

Australian University Quality Agency (AUQA) is established in 2000, and it is responsible for auditing the quality of Australian Universities. Whoever, the system of quality assurance in Australia is quite different to what is practiced in the US and UK. There is no specific criterion for quality assurance and the AUQA audits the internal quality assurance process of the audit institution**.**

- **Arabic Region**

Several initiatives towards the formulation of national and inter-Arab QA system were lunched including:

- The criteria of an Arab Establishment for program QA (AEPQA)
- (ALECSO) in which called for setting Arab standards for Quality and academic excellence.
- Arab Network for Quality Assurance in Higher Education (ANQAHE).
- Arab Quality Assurance and Accreditation Network (ARQAANE).

2.2.3.6 Customer of HE:

Quality is often seen as meeting customer's stated or implied needs. This involves a number of complications, with the issue of who is the customer of HE? (Sohney *et al*. 2004, Zairi 1995).

Meirovich *et al*. (2006) point out that it is difficult to identify the customer of HE, several different constituencies, such as student graduates, employers, and taxpayers (Michael *et al.* 1997) defined the customer of Higher Education as: "*the student as a consumer of knowledge and services, the future employer or graduate school as a consumer of the student product, and society as a whole as taxpayers and beneficiaries of the educational operations of the institution"*, this consist with (Owlia *et al.* 1998, Lawrence *et al.* 1997 and Sahney *et al.* 2006).

For example, in the UK, three billion pounds are spending annually by the Government for supporting the direct costs of the higher education sector. It is therefore one of the major stakeholders in higher education and is rightly concerned in obtaining value for money and ensuring the competitiveness of the UK economy by encouraging the provision of a highly educated workforce. If the quality of the

courses provided are not approved and failure is subsequently rectified, government funding is withdrawn (Ahmed 2008).

The Harvard University state '*the customer is defined as anyone to whom we provide information or service* '.

Oregan University considers its customer in this light "*our students are our purpose for existence"* (Michael *et al.* 1997).

Kanji *et al.* (1999) divided customers of HEIs into different groups, namely: existing and potential students; employees; employers; government; and industry.

Other authors argue that the dual roles of the student (customer/grade seekers) in Higher Education make the implementation of TQM in Higher Education very hard (Meirovich *et al*. 2006).

Moreover, Mete (2004) pointed out that the customer of HE are: students, parents, alumni, employers, faculty, local community academic disciplines, and staff.

Ho, *et al.* (1995), Chua (2004) pointed out that students, as consumers of HE, could be considered the main customer.

However, while students are the most obvious customer of an institution of higher education, many other stakeholders also function as customers for varying areas of operations (table 2.7).

Table 2.7 commonly recognised customers of higher education institutions

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(Source, Quinn *et al.* 2009).

In the light of above, there is a different group of customers in education such as student, parents, corporation, faculty members, society …etc. At the same time, many of the external stakeholders provide funding to the university and have a high interest in the functions of the university.

Therefore, when narrowing the emphasis on HE there are several areas of importance to stakeholders; graduates satisfaction with placement services, alumni feedback, and students satisfaction for registration and/or financial aid processes (Mergen *et al.* 2000). Thus, the total quality considers a wide range of beneficiaries or stakeholders, such as society and business and not just the internal customers of the university (Scrabec 2000).

2.2.4 Experiences of Quality and TQM in Higher Education Institutions

In the higher education sector Quality and TQM has been adopted in many parts of the world including U.S., UK, and Australia. Many universities began implementing Total Quality strategies under an administrative leadership and shied away from classroom and curriculum issues (Brigham 1993). Examples of success in TQM can be obtained from many universities and colleges around the world such as: University of Wisconsin-Madison, U.S.; Clemson University, U.S.; Rochester Institute of Technology, U.S.; Oregon State University, U.S; University of Wollongong, Australia; Texas Southern University; Harvard College; University of Tennessee; and Ohio State University; Virginia Commonwealth University; University of Wolverhampton, U.K.; and South Bank University, UK.

In this section, experience of implementing TQM in some universities is highlighted:

2.2.4.1 Wisconsin-Madison University (USA)

University of Wisconsin-Madison has adpoted Total Quality Improvement (TQI) to the curriculum development process. As Hansen (1993) described the TQI approach to an individual course and review its key elements, namely, customer focus, student involvement, and continuous improvement. This is followed by each of these elements was operationalised: customer focus, through an emphasis on proficiencies in using customer knowledge; student involvement, through team-oriented research projects; and continuous improvement, through ongoing course and instructor evaluations.

2.2.4.2 Clemson University (USA)

Clemson University has had success-applying TQM in different areas. In particular, in 1993 the programme initiated, the Continuous Quality Improvement (CQI) Programme in the college of Engineering at Clemson University is an integrated effort of faculty, staff, students, and administration in applying the principles of quality management and continuous improvement in everything they do.

2.2.4.3 Institute of Technology (RIT)

The RIT committed to an 11-steps program identified by colleges of Business and Engineering to integrate TQM into curriculum, including a process for assessment and advisement. Faculty needed to be converted to TQM. This was approached in three ways (Ahmed 2008):

• Informational: Reading materials were made available.

• Training: All faculty and particularly all staff went through a four day training seminar presented by Xerox Corporation.

• Experience: Representatives from industry are regular visitors to campus. The key question they answer is what do you expect of graduates?

Not all the results are in yet on this TQM endeavour. Quantifiable measures are part of the long range evaluation plan, but RIT has just begun. Indicators are positive so far.

2.2.4.5 Oregon State University (OSU) (USA)

It became one of the first research universities in the United States to introduce the TQM methodology into its administrative structure in early 1990s. Coate (1993)

advocates, "*TQM experience to help in the organizational restructuring and process reengineering required by deep budget cuts in Oregon higher education*". Beginning with finance and administration, quality improvements teams were introduced and achieved significant improvements in process effectiveness and efficiency.

OSU employed a through top-down approach to the implementation of TQM, using quality function deployment to identify customer requirements and translate these into university processes (Coate 1990, 1993).

2.2.4.6 Texas Southern University (TSU)

(TSU) introduced TQM activity, which is known as TIGER SPIRIT 2000 Programme, is to establish four (4) management training activities that are designed to improve the leadership and practical critical skills of new and middle managers who are responsible for fostering the development experience of TSU employees. This component of the TIGER SPIRIT 2000 programme is based on the following long-term primary goals (Ahmed 2008):

• Improve productivity, effectiveness and efficiency of university service by department and better utilization of talents, abilities and potential of employees.

• Help employees to develop their knowledge, skills and abilities so that they might become better qualified to perform the duties of their present jobs and advance to more responsible positions.

• Provide for the development of managers capable of organizing and developing effective management systems for the accomplishment of each division's goals and objectives.

• Prepare employees to deal more effectively with the growing customer service demands faced by organizations worldwide.

2.2.4.7 The Harvard College (HC)

(HC) introduced TQM programme in order to improved library services. The Harvard College Library created a task force, which rewrote the library's vision statement, and considered changes that would have to be made in order to develop a new organization culture- one that highlights the changing nature of staff roles and responsibilities in an era of pervasive change (Clack 1993). With the help of

consultants, Harvard learned about TQM, and found that its principles of service excellence, teamwork, ongoing training and skill building, process focus, continuous improvement, and co-operation across boundaries could help them make the changes they needed.

2.2.4.9 Ohio State University (OSU)

In the mid-1990s, (OSU) introduced Continuous Quality Improvement (CQI) approach, which made a commitment to become more efficient, less bureaucratic, and more responsive to changing needs-as well as to be cost effective in their daily operations. The University made a commitment to provide ongoing, continuous improvement in their services and management of University resources. To accomplish this, Business and Finance undertook a programme of CQI, which continues to inform and inspire their staff. The University began by providing a five-day CQI programme for all staff in all departments of Business and finance: over 1200 full-time regular employees. This programme encourages and recognizes continuous quality improvement in their overall operations.

2.2.4.10 Commonwealth University (VCU) Virginia

(VCU) has implemented some major improvements programmes using the TQM approach in1991. As Cowles *et al.* (1993) note, "*the potential benefits to TQM to VCU as a means for improving student/faculty/staff morale, increasing productivity, and delivering higher quality services internally, as well as to students and other external customers"*. These have included improvement of a personnel action processing form, creation of a campus computing service request tracking system by using a systematic approach to problem solving consistent with the TQM concept of continuous improvement, potential cost savings and development of an alumni programme activities (Cowles *et al*. 1993, Owlia *et al*. 1997). The pilot programmes have taught lessons about the process of change.

2.2.4.11 University of Wollongong (Australia)

The Library at Wollongong introduced a formal TQM programme in 1994. Prior to 1994, planned organizational change and development achieved a cultural, structural

and staffing framework, which includes most of the elements fundamental to the success of TQM. Having achieved large-scale change, it was timely to consider a longer-term management programme, more appropriate to the current environment, which would continue to facilitate improvement in every aspect of the Library's operations. At Wollongong, TQM programme is entitled Quality and Service Excellence (QSE) and has two main objectives:

- ✓ Develop excellent Library services through the implementation of a TQM programme.
- ✓ Develop a systematic approach to documenting the improvements in client service, which have been achieved to data, as well as providing a basis for measuring future gains. One of the most successful method is the self-styled *Command Module*, which is a standing Quality Implementation Team (QIT) comprising both academic and administrative staff which set itself up to provide improved MIS data in respect of student numbers, recruitment, target attainment and so on. However, Doherty (1993) stress: "*Communication about the changing systems and dissemination of TQM skills throughout an organization the size and complexity of the University of Wolverhampton was, and still is a very difficult task".*

2.2.4.12 London South Bank University

In the spring 1992, the university introduced the TQM programme. As Geddes (1993) and Owlia *et al.* (1997) described application of the TQM approach to one aspect of the administration of South Bank University, the relationship between student as customer and university as supplier. This technique includes development of service quality standards and agreements for each service, support, and academic department. To create these quality service agreements, 32 separate customer-supplier working groups (CSWGs) were established at South Bank University (Geddes1993, Owlia *et al.* 1997).

2.2.5 Internatinal Self- Assessment Models :

There are more than hundreds of National Quality Awards existing in different categories but amongst them most renowned National Quality Awards are Malcolm

Baldrige National Quality Award (MBNQA) of USA, Deming Prize (DP) of Japan and European Foundation of Quality Management (EFQM) (Paul, *et al.*, 2011).

The earliest approach to total quality audit process is that established in the Japanese 'Deming Prize', which is based on highly demanding and intrusive process (Oakland 2006)

The Deming prize including:

1- Top management leadership and organizational vision and strategies.
2- TQM frameworks
3- Quality assurance system.
4- Management systems for business elements.
5- Human resources development.
6- Effective utilization of information.
7- TQM concepts and values.
8- Scientific methods.
9- Organizational powers
10- Contribution to realization of corporate objectives.

2.2.5.1 Malcolm Baldrige National Quality Award (MBNQA)

United State in the late of 1980s develops one of the most famous and now widely used frameworks, the MBNQA. This framework aims to:

1- Help improve organizational performance practices, capabilities and results;
2- Facilitate communication and sharing of best practices information;
3- Serve as a working tool for understanding and managing performance and for guiding, planning and opportunities for learning

The MBNQA (2011/2012) education criteria are built upon the following set of interrelated core values and concepts:

Visionary Leadership; Learning- centred education; Organization and personal learning; Valuing faculty, staff, and partners; Agility; Focus on the future; Managing for innovation; Management by fact; Social responsibility; Focus on results and creating value and System perspective.

The core values and concepts are embodied in seven categories, as follows:

1- Leadership

2- Strategic planning
3- Students, stakeholder, and market focus.
4- Measurement, analysis, and knowledge management.
5- Workforce focus.
6- Process management.
7- Results.

Figure (2.2) provide the MBNQA (2009/2010) education criteria framework connecting and integrating the categories:

Figure 2.6 MBNQA (2011/2012) education criteria framework (source; MBNQA website)

The criteria are designed to help organisation use an integrated approach to organizational performance management that results in:

- Delivery of ever-improving value to students and stakeholders, contributing to education quality and organizational stability.
- Improving of overall organizational effectiveness and capabilities.
- Organizational and personal learning.

According to Hodgetts (1993), three lessons could be learnt from the MBNQA criteria in general. The first one is that there is no best way to achieve world-class quality. However, each Baldrige winner's quality system has been tailored to meet its specific needs. Each has combined technology, management skills, and training and human resources policies to meet customer needs in unique and powerful ways. A second lesson is that the principles of quality management can be applied broadly across organisations. At the same time, the meaning of the term total quality management itself has become very broad and difficult to define. In many ways, quality management is now simply synonymous with good management. The third lesson is that quality is not just a goal that an organisation achieves, but an ongoing quest to accountability improves.

2.2.5.2 European Foundation of Quality Management (EFQM):

This framework recognised that processes are the means by which an organization harnesses and releases the talents of people to produce results/performance.

Moreover, the improvement of process through involving all the people will lead to performance improvement.

The EFQM model (updated 2010) is based on eight fundamental concepts (Medhurst. *et al.* 2010)

1- Achieving balanced results.
2- Adding value for customers.
3- Leading with vision, inspiration& integrity.
4- Managing by process.
5- Succeeding through people.
6- Nurturing Creativity & innovation.
7- Building partnership.
8- Taking responsibility for a sustainable future.

The model is represented in a pictorial form of nine boxes, which are interrelated (figure2.4)

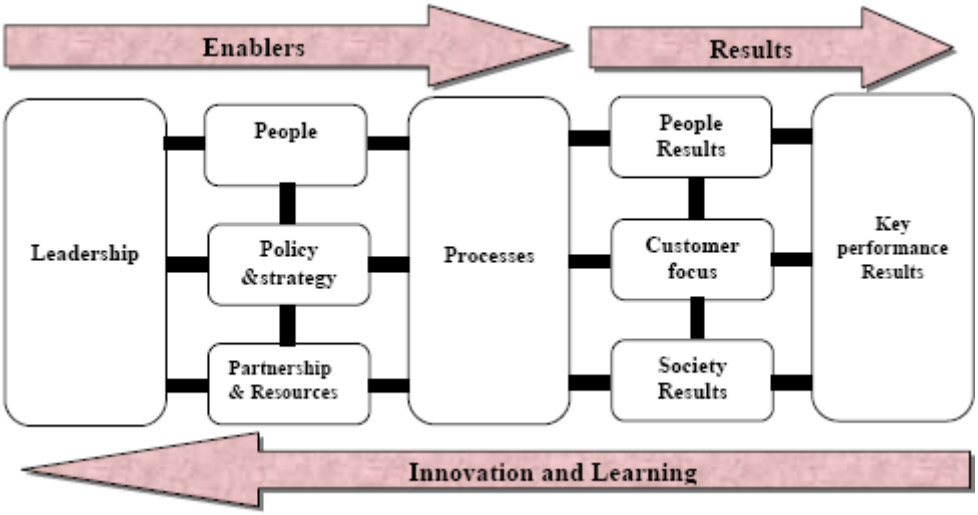

Figure 2.7 EFQM model (source adopted HEFCE 2005)

Furthermore, EFQM (2003) states:

Leadership: Excellent leaders develop and facilitate the achievement of the mission and vision. They develop organisation values and systems required for sustainable success and implement these via their actions and behaviours.

Policy and strategy: excellent organization implements their mission and vision by developing a stakeholder focused strategy that takes account of the market and sector in which it operate.

***People management*:** Excellent organization mange, develop and release the full potential of their people at any individual, team-based and organizational level. They promote justice and equality and involve and empower their people. They care for, communicate, reward and recognise, in a way of motivates staff and builds commitment to using their skills for the benefit of the organization.

Partnerships and resources: Excellent organisations plan and manage external partnerships, suppliers and internal resources in order to support policy and strategy and the effective operation of processes. During planning and whilst managing partnerships and resources they balance the current and future needs of the organisation, the community and the environment.

Process management: Excellent organisations design, manage and improve processes in order to fully satisfy, and generate increasing value for, customers and other stakeholders.

Analysing the structure of the relationships in the EFQM model, process management appears to be the link between the other agents and the results (Mora *et al* 2006). However, Zink *et al.* (1995) pointed out that the key processes of a higher education centre will not be the same as those in other organisations, but once they have been identified, there should be no differences in terms of their management and improvement.

Kanji *et al.* (1999) considered the key processes are those that have a significant effect on the critical results for a given organisation. In universities, these processes are identified by Zink et al (1995) and Pires D.R (2003) as the processes of administration and service, teaching and learning, and research.

Additionally, Pupius (2000) illustrates how the EFQM model applies in HE context by contextualising the criteria as follows:

Results orientation: The key word is "balancing". Emphasis would be put not just on academic outcomes or quality assurance results, but on results from student and staff experience surveys on impact on community.

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

Leadership and constancy of purpose: This is about 'walking the talk' and 'living the values'. Leaders would be all academic staff who teach students and all administrative managers. The institution would develop a strategic vision and share this with all staff and students.

Management by process and facts: institutions adopting this principles begins to identify, map and model key processes and how they relate to elements of hierarchy e.g. faculties and departments.

People development and involvement: trust is an essential for effective process working. Involvement can be structured through improvement teams, review teams, process improvement etc.

Continuous learning, innovation and improvement: the methodology embodies the principle of self-evaluation or self- assessment. The institution would learn from the

feedback by reviewing impact of strategies and actions, trends in results, performance against target and by comparing with best-in-class through benchmarking.

Partnership development: this would include partnership and collaboration with partner colleges, business and local organisations.

Public responsibility: for an institution, this would include defining a role within the local community, region or country to enhance the social and economic well-being or the people.

In the higher education sector, Tari (2006) points out that the EFQM model is a general instrument which can be successfully applied to a HEI as improvement tool.

In addition to the above two main TQM models in HE (EFQM) and (MBNQA) which were highly adopted and practiced in HEIs in Europe and in the USA respectively.

2.2.5.3 Dubai Quality Award (DQA)

In the Arabic countries, Dubai Quality award (DQA) is based on the Excellence model of (EFQM).

The Dubai quality award was introduced in 1994 by Dubai's Department of Economic Development. The award was introduced as a means of improving the standards of businesses operating in Dubai. This award is presented to those companies that have demonstrated a commitment to best practices in their respective fields. The latter has been successfully applied in private and public sector organisations since 1992.

This model provides a holistic framework for organisational excellence. All nine criterion parts work as one complete system, such that any deficiency in one area will affect the score in other areas. The model does not deny that the system has parts, but it focuses on the whole, where the whole is larger than the sum of its parts. The model was designed to be non-prescriptive, in order to acknowledge the fact that there may be more than one approach for achieving excellence Figure (2.5) shows the criteria.

Figure 2.8 Dubai Quality Award criteria (Source; DQA website)

Appendix (H) shows various frameworks based on National Quality Awards and the CSFs of TQM implementation.

In addition to these famous models, there is other models are used to enhance quality of HE, for example:

Kanji (1999) has developed a business excellence model that is made up of 4 principles, each principle divided into core concepts: delight the customer; management by fact, people-based management and continuous improvement.

Srikanthan, *et al.* (2002) proposed the model addressing quality management in education (QME), they quote "*it is possible to undertake a synthesis of the features of different models for academic quality from recent research literature in order to develop a generic model addressing educational process"*.

Sakthivel, *et al.* (2005) developed a 5-c TQM model of academic excellence, this including: Commitment of top management, course delivery, campus facilities, courtesy and customer feedback and improvement.

Hughey (2000) propose the use of Deming' 14 points of quality in education context.

Mukherjce (1995) propose the use of TQM in education through customer orientation, management commitment, continuous improvement and innovation.

Dervisotiers (1995) used the concept of critical success factors to the education system.

Mergan, *et al.* (2000) propose a generic quality management framework that has three main components: Quality of design, quality of conformance, quality of performance. And he identified a number of shortcomings in quality management

P.B. Sakthivel, *et al.* (2005) have developed a comprehensive model, namely the TQM 9-C EDEX Model relevant to engineering education in India**.**

Ho, *et al*. (1995) propose a model called (HETQMEX model) through a program of training and implementation.

Green (2007) identify the relevance of Feigenbaum's quality model to manager in higher education and put forward a possible way of implementing such a model in an education area. For more information (see Appendix D)

To sum up, all awards focus on the evaluation and improvement to achieve institutional quality management. These awards emphasize a customer driven quality management and stress to support organisational systems to purse this strategy. All awards focus on critical areas of evaluation based on leadership, customer focus, strategic planning, information management, human resource management, process management, relationship with stakeholders and performance results.

The award models provide organisations a mean to measure their performance against universal criteria with a view to identify their strengths and weaknesses in different business processes. This assessment criterion facilitates organisations to affect appropriate improvement strategies.

2.2.6 TQM Crtical Sueccess Factros (CSFs):

The review of the literature suggested that there are numerous (CSFs) that can be identified as being crucial to the successful implementation of TQM in higher education institutions (Sahu, *et al.* 2013). However, the CSFs can be defined as the critical areas which an institution must accomplish to achieve its mission by examination and categorization of their impacts (Salaheldin, 2012).

Moreover, the critical success factors of TQM can be described as best practices or ways in which firms & their employees undertake business activities in all key processes (Paul 2011).

TQM models involves number of factors or essential such as top management's leadership, teamwork, customer focus, employee involvement, training , and

continuous improvement tools and several other elements, which are all required for successful TQM implementation

Consensuses in term of what all the key of TQM .Tummala, *et al. (*1996) identified the core concepts from the significant contributing factors promoted by the quality gurus as a fundamental in developing the strategic and operational strategic to continuously improve the quality of product or services. The core concepts of strategic quality management are:

1- Customer focus.
2- Leadership.
3- Strategic quality planning.
4- Design quality, speed and prevention.
5- Continuous improvement
6- People participation and partnership.
7- Fact-based management.

When TQM was applied in education, Al-sulimani *et al.* (1994) identified the key elements of TQM:

1- Top management commitment.
2- Customer Focus.
3- Employee involvement.
4- Training &Education.
5- Communication.

E SA Patrica *et al.* (2008) divided the Principles of TQM into hard aspects - such as work design and statistical process control- and 'soft' aspects – such as leadership, empowerment and training, customer focus, people involvement and continuous improvement-.

Hafeez (2006) provided a comparative study of the work of ten authors, who believed have had a major influence in developing the TQM discipline. 18 elements are identified and viewed as important elements.

According to (Eagle *et al*. 2007) the basic principles of TQM as applied in higher education are: Delight the customer; People- based management; Continuous improvement; Management by fact.

Cole (2002) point out that TQM can be most effective through employee empowerment and participative management

Choppin (1995) point out that while the principles of TQM may appear in different forms, those developed by the British quality foundation, represents the core of most TQM initiatives. These are set out as 14 principles cover the following topics:

Highest priority – Quality definition – Customer definition – Customer satisfaction – Aim- Communication –Values – Mutual respect and benefit – Health and safety – Commitment – Participation and ownership – Continuous improvement – Performance resource – Investment.

2.2.7 Summery

This section of the literature review discussed the TQM in service sector; this includes the different between the manufacturing and services. Also the concept of higher education from different perspectives was reviewed in relating to TQM which reveled that there are many customer of HE and everyone has specific needs should be met.

Moreover, experiences of TQM in HEIs around the world were presented in order to learn from their journey to TQM; these include universities in USA, UK, Australia and Arabic region.

Furthermore, this section presented a review of quality models including EFQM and MBNQA and DQA in HE where these models are highly adopted and practiced in in Europe, USA and Arabic Countries. The aspects of these models are reflecting the notion of TQM philosophy. Also, they provide self-assessment mechanism for HEIs that could help them in review and assess their activities and results.

In the next section, the theoretical framework will be presented based and developed from the literature review. It will highlight the aspects and concepts of the key TQM principles.

Section 3: Theoretical Framework

2.3.1 Introduction

The previous chapter presents literature review including TQM theory in general and TQM in HE in particular where different issues related to this topic were discussed. This chapter provides the analytical framework which was developed by the research from literature review. The framework is based on TQM philosophy where a number of key TQM principles are identified. Also, this part will highlight the aspects and concepts of those key TQM principles both in general TQM theory and TQM in HE. The development of the framework will also play a significant role in the process of selecting the appropriate methodology, which is the case study research strategy.

2.3.2 Importance of Framework

A theoretical framework guides research, determining what variables to measure, and what statistical relationships to look for.

Sekaran (2003) defined the framework as "*a conceptual model of how one theorises or makes logical sense of the relationships among the several factors that have been identified as important to the problem*". Also, Sekaran (2003) and Fisher (2007) pointed out that the relationship between the literature survey and the framework is that the former provides the raw materials (solid foundation) from which the latter is built or developed (likewise this research).

Hussey, *et al.* (2009) addressee that the framework is a collection of theories and models from the literature which underpins the research problems.

Furthermore, Saunders *et al*. (2007) indicate that the framework helps organise and direct data collection and analysis. Fisher (2007) points out that the framework prepares and helps undertaking the findings out, and it gives a sense of control over the research.

In the light of above, the theoretical framework based on reviewing the literature, as well as, the experience of the world-class universities, a research model was developed to assess the quality culture at the case studies through TQM practices (figure 3.1)

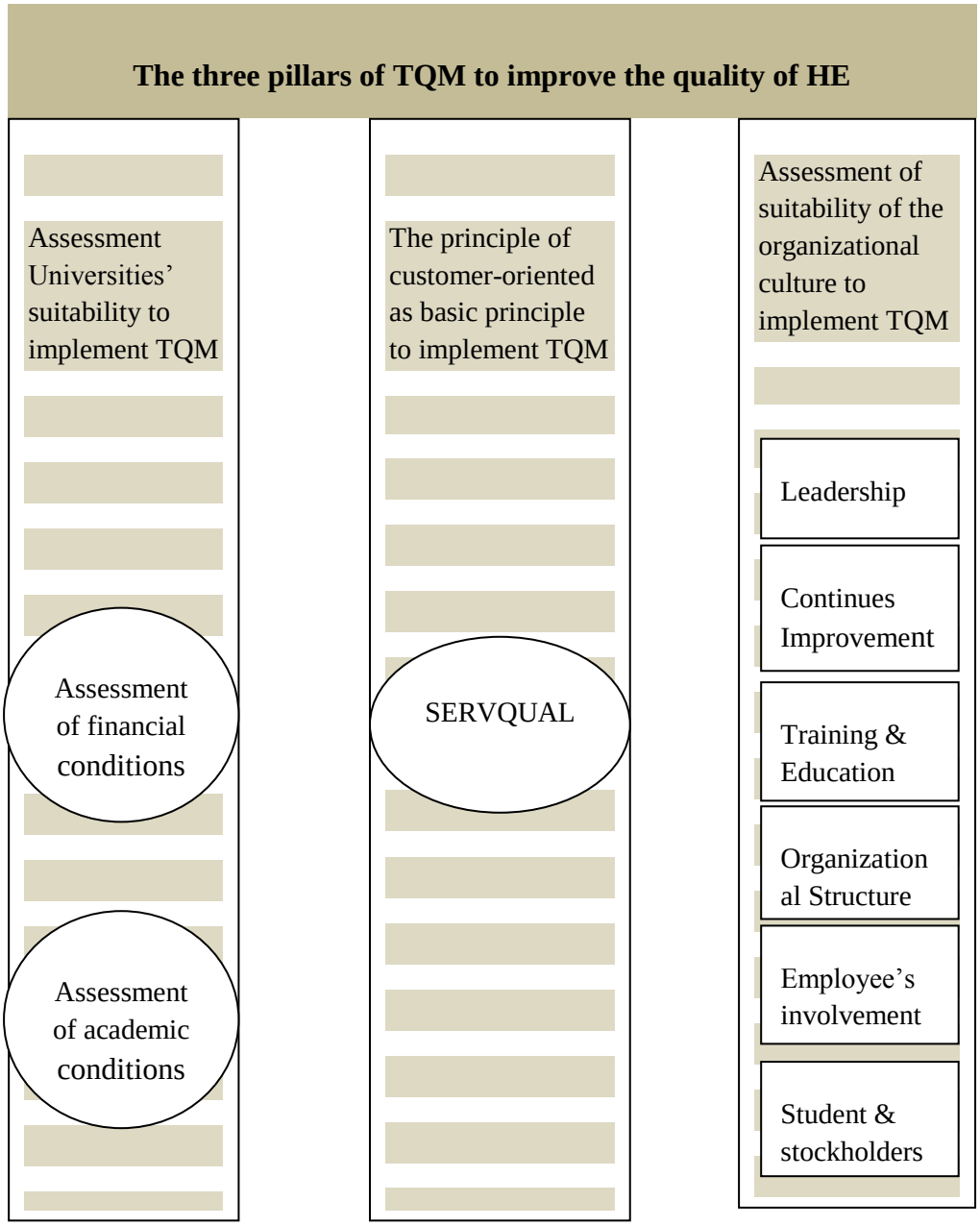

Figure 2.3.1 Theoretical framework (source: the author)

The theoretical framework shows that the success of TQM implementation in academic context depends on: Quality culture (CSFs), customer orientated, academic and finical situation. These three pillars are very essential to implement TQM successfully. Therefore, assessment of these three pillars will be important and

necessary to determine the adequacy of the prevailing culture in the case studies to implement TQM.

So, the theoretical framework of this study consists of:

- **Quality culture**

The culture of HEIs should be changed in order to implement TQM successfully, direct activities should shifted towards continues improvement. In spite of the necessity of cultural change, it is recognised to be difficult to realise, while attitudes and behaviour of the people need to be modified.

Giertz (2000) states, *" It has been suggested that the stronger the academic culture, the harder the resistance to TQM, and that since the academic culture is stronger in old universities than newer institutions, the resistance will be harder in the former ".* Gonzalez *et al*. (2002) further add that a change in organisational design is one of the suggested approaches to achieve cultural change. However, this approach firstly is slow and very costly; second its affects on behaviour are imprecise and needs long time to be evaluated.

Newby (1999) states that the nature of the management culture in some institutions, the traditional culture of higher education and the heritage of past quality initiatives are the broad cultural barriers to TQM in higher education. This indicates that a major obstacle to TQM in HE are culture issues. Resistance to change might occurs, while people fear new concepts, future, and loss of position. Changing the culture needs time and efforts, since changing people's attitudes and beliefs in certain organisation is not easy, but is also not impossible.

According to (Colesca 2006) the cultural values belonging to the quality management could:

- ✓ Organisation should be focused on customers, identifying their needs and satisfying them;
- ✓ It is people to achieve quality, the human resources represent the main component within the organisation it is very important to satisfy it;
- ✓ The quality implies any activity of organisation;
- ✓ Progressive improvement represents the basis of quality;
- ✓ Mutual collaboration based on teamwork in the best way to make progress;

- ✓ It is necessary to be willing to get information about other organisation' experience and innovation in order to search permanently for practical improvements.

In addition, lomas (2004) reported that the most important issue for the effective embedding of quality in academic context is the quality culture. He notes that a quality culture in an institution has been created when there is an orientation towards the needs of all its stakeholders and there are clear, effective mechanisms to support its entire staff to achieve the organisation's objectives.

Based on the above discussion, there is an agreement in the literature that before implementing TQM principles, it is necessary to conduct an analysis of the culture of the institution. TQM initiatives will be more successful if they are implemented in a supportive culture. A supportive culture is one that will allow learning for the members of the organisation.

Some attributes of organisational culture are open communication, trust, innovation and cohesion among employees. The supportive culture should emphasise teamwork, employee empowerment and participation, continuous improvement, a customer focus and an appropriate leadership. When reviewing the organisational culture, it is necessary to assess the readiness of the organisation for concepts such as TQM. The organisational culture should reinforce and promote

According to Oakland (2003) it is not easy to implement TQM in traditionally managed organisation, a cooperative culture need to be created by the management. Employees should participate in development of vision, strategies and plans to ensure their commitment.

As mentioned earlier, critical successes factors (CSFs) will be used to assess the quality culture and used as a guideline for TQM implementation.

Thus, this study starts with analysing the present quality culture of the case study, and asses to what extent it is appropriate to implement TQM.

Through the comprehensive review of the TQM literature in education context, and the theoretical framework, eight factors been recognised the present study identified a set of eight TQM practices (quality culture) including : Leadership, education and training, continues improvement, organisational structure, student and stockholders, employee involvement, in addition to the academic and financial conditions.

- ✓ **Leadership**

Sirvanci (2004) point out that top management's leadership is one of the essential elements of TQM. He added that in every country where TQM has been implemented, there are examples of company executives who have initiated the cultural change and carried their organisation through the quality journey.

A growing number of studies have reported on the leadership category and its relations to the success of TQM program. Also, the role of leadership as a key factor in effective quality management has been clearly recognised by the gurus such as: Deming, Crosby and Jouran.

Waldman (1993) concluded that the firms with high top management commitment produced high quality products.

Tari (2006) reports that one of the most important factors in the success of TQM in higher education institutions is leadership, where top management acts as a driver of TQM implementation by creating values, goals and systems to satisfy customers.
Sakthivel *et al.* (2007) point out that commitment of top management and leadership is the most significant predictors of TQM implementation.

Calvo-Mora *et al.* (2006) pointed out that the management's commitment and leadership in quality must be visible, permanent and present at all management levels since it acts as the guide and promoter of the TQM implementation process.
In addition, almost all excellence models (MBNQA, EFQM, EQA, Kanj) include leadership as an enabling driver contributory element (Idris *et al.* 2008).

In light of overall, top management of HELs should be aware of the needs of TQM; understand the importance of employee involvement and concentrate on long- term stable performance measures while actively showing their support to TQM practices through their actions (Bayraktar, *et al*. 2008).

Oakland (2000) and Deming (1986) identified five requirements for effective leadership:

1- Clear beliefs and objectives in the form of mission statement;
2- Clear and effective strategies and supporting plans;
3- The critical successes factors and the critical process;
4- The appropriate management structure;
5- Employee participation through empowerment and continues improvement practices (evaluate, plan, do, check, act).

Based on the above dissection, Leadership commitment plays significant role in articulating the vision, and mission statement, setting strategic intent and objectives, shared values, and establishing an effective support mechanism for creating and sustaining enabling environment for superior performance. Top management commitment to TQM manifests in strategic planning, customers' focus, quality-based cultural transformation, functional integration, efficient processes, employees' involvement and empowerment, knowledge management pursuits, stakeholders' participation, corporate ethical and social responsibility, good corporate governance, and effective resource management (Khan 2011)

Ahire *et al.* (1996) point out that the top management shows its commitment in quality by emphasising the importance of quality in relation to the cost and schedule of production. Thus, it must provide adequate resources to the implementation of TQM efforts and communicate the organization's intent and attitudes towards quality.
To sum up, Top management support has been emphasised by most researchers and authors in regard to contributing to quality performance (Alharbi, *et al.*, 2012).

- ✓ **Education and Training:**

Adoption of any new strategy or approach e.g. continuous quality improvement approach is most likely associated with change. Accordingly, any change programme needs proper education and training of those who would be involved in this new strategy or approach.

Several studies have shown that training and education are crucial to successful TQM implementation (Ahire *et al.* 1996, Black *et al.* 1996, Deming 1982, Flynn *et al.* 1994, Powell 1995, Saraph *et al.* 1989, Calisir *et al.* 2001, Flumerfelt *et al* 2011)

For example, Point 13 in Deming quality approach highlighted the importance of education: '*Encourage education and self-improvement for everyone'*. Deming adds that shortage exists at the high level of knowledge not in good people, and this is true in every field. Furthermore, Oakland (2000) points out that the effective training programmes are those who take in consideration the need of all organisation's members at all levels.

Batten, (1992) describes the importance of education and training in TQM by the following words: "Train, Train, Train!".

(UNESCO) and the International Labour Organisation (ILO) who have jointly stated that:

Education and training contribute to an individual's personal development, increase her/his productivity and incomes at work, and facilitate everybody's participation in economic and social life. It follows that education and training can also help individuals to escape poverty by providing them with the skills and knowledge to raise their output and generate income. Investing in education and training is therefore an investment in the future; knowledge and skills are the engine of economic growth and social development" (UNESCO and ILO, 2002).

Venkatraman (2007) points out that HEIs should offer training programmes to their staff taking into consideration aligning such programmes with institution's objectives. Osseo-Asare *et al.* (2002) stress that the HEIS is in dire need of education and training of top management (e.g. deans, assistant deans, head of department, quality managers) and other personnel involved when adopting quality programme.

There are many examples of training courses for TQM implementation including: (leadership skills, communication, teamwork, problem solving, interpreting and using data, meeting customer requirements, process analysis, process simplification, waste reduction, cycle time reduction..etc, and other training that effects employee effectiveness and efficiency).

So, there is no doubt that Education and training in TQM programme will help top management and staff understanding the terminology involved and to increases their involvement and commitment towards the quality programme. Whoever, the training needs of academic and non-academic staff should be identified separately and considered as a quality awareness workshop, and missing skills sets should be determined and new training should be scheduled of fulfil these gaps(Bayraktar.E. *et al.* 2008).

To sum up, training and education element is important in order to build the skills of employees, and should involve basic job skills and process training, including induction, TQM awareness, customer care and training in the use of tools, techniques and systems.

Thus, a successful TQM environment requires a committed, well-trained, and educated work force that participates fully in quality improvement activities. Insufficient training on quality as well as training in problem identification and problem solving techniques leads to failure in TQM implementation program.

- ✓ **Organisational Structure:**

Organisational structure described as the pattern and the means of how people interact with each other, how communication flows, and how power relationships are defined (Hall 1987). It refers to how job tasks are formally divided, grouped, and coordinated.

TQM underlines the empowering of employees to make decisions and use their own intelligence. It requires employees to identify and diagnose quality problems and take corrective actions without going through the management hierarchy

These aspects of TQM put forward that it is less likely to be effective in organisations with type of structures that centralise decision-making authority in managerial hands and use direct, inflexible control mechanisms. In such organisations, coordination and problem-resolution occur at high levels of the hierarchy. Employees are unlikely to recognise problems as they occur due to their limited understanding of the overall process. Even when employees recognise problems, they do not have the authority to correct them without management approval (Liu *et al.* 1990).

Organisational control processes are hierarchical (Barker 1993) and involve vertical coordination and communication, and vertical dependency (dependency on supervisor).

In contrast to companies with control- orientated mechanistic structure, those with flexibility-oriented value systems attempt to decentralize decision making. In such institutions, problems are resolved at the point at which they occur, and subunits are based on workflow and process instead of function. In such companies, Decision-making authority is given to employees who are trained to diagnose problems and implement solutions (Jasmine *et al.* 1999).

In order to implement TQM successfully, Opportunity should be given to the Employees to make appropriate decisions within system parameters. Several studies (Harris *et al.* 1998, Johannesson and Ritchie, 1997) suggest that a participative structure can improve TQM outcomes.

TQM also requires a move away from vertical lines of communication and a move toward communication across departments, organisational levels, and functions. These open and informal lines of communication can help solve problems and enable more rapid implementation of change.

Open communication between all levels in an organisation creates an environment in which people can work with confidence and this will help to reduce barriers between top levels and those below. Open communication needs an atmosphere in which people feel free to voice their opinions and, at the same time, the leaders of those institutions that adopt a strategy for open communication should take into account the

results of any discussion for use as data in decision-making. Otherwise, open communication wastes time and effort, and will lose respects.

The communication should be based on common sense, be two-way, use jargon-free language and be consistent in the approach adopted (Dale *et al.* 2007). He suggests that communication must be by example, with management doing what they say must be done, and they must assess, on regular basis, to ensure that the messages they wish to covey are getting through. Mangers must recognize the difference between the art of communication and act upon the views of those they manage.

In addition, communication should include both written and verbal mediums in both group and individual mode (e.g. notice boards, whiteboards, news-sheets, booklets, team-meeting minutes, electronic mail, reports, and memos).

Based on the reviewed of the literature, open communication plays a key role to create a feel among all the staff in which everyone do his best to achieve the organisation . Moreover, this process builds a wider relationship with the members of the organisation and at the same time could be used as a feedback process for quality decisions.

- ✓ **Continues Improvements (CI):**

It is defined as company-wide process of focus and continuous incremental innovation (Carpinetti 2001).

In its website, the Manchester Metropolitan University has defined continues improvement in the university as "*CI is an ongoing effort to improve products, services and processes to provide excellence and added value for the customer. It is important to emphasise that continuous improvement isn't one particular system or specific way of doing something, it's a mindset, based on the knowledge that there is always a better way of doing things and therefore a journey that never ends*".

Johnston (2008) compares the CI and the opposite and stressed:

(CI is constant, gradual and incremental improvement. It is undramatic, involves small steps, is a group effort, focuses on processes, and is driven by people. Eighty percent of improvements in an organization come from continuous improvement. The opposite of CI is dramatic change, which is visible, involves big steps, is abrupt

and sudden, is based on individual work and ideas, and is driven by technology. This kind of change, while not bad, happens infrequently. It moves us to a new level of performance from which continuous improvement begins again. An example is a new financial accounting or personnel/payroll system).

So, CI is a process that aims to concentrate on problems during process itself in order to reduce error before the end of the process. The survival of an organisation's products and services requires a mission statement that continuous quality improvement is one of the most important goal and a never-ending process.

Saylor (1996) point out that it is important to use the same CI system consistently throughout the organisation. And he determined the CI system cycle in six stages:

1) Definition the focus; 2) determining improvement opportunities; 3) selecting improvement opportunity; 4) improving by using an improvement methodology; 5) evaluating the results and 6) do it again and again. This cycle is never-ending.

Thus, it is not enough for an organisation to do better than it did in the past. The external demands an organisation faces are continuously needs increasing.

In the educational context, any college or university using CI "by whatever label" are finding them to be proven methodologies for increasing effectiveness and building organisational agility (Rice 2003).

There are many different approaches to CI which can include (Baily 2011):

- ✓ Undertaking process mapping and improvement
- ✓ Benchmarking internally or externally to identify best practice
- ✓ Adopting models and frameworks such as Investors in People, Customer Excellence or the EFQM Excellence Model to self assess and drive improvement activities
- ✓ Applying creativity and innovation tools
- ✓ Using customer and staff surveys
- ✓ External and internal audits.

- ✓ **Employee Empowerment and Involvement:**

The term "empowerment" in TQM philosophy refers to giving people the ability, authority, confidence, and the commitment to take the responsibility and rights to improve the process in order to achieve organizational values and goals (Besterfield *et al.*, 2003).

Likewise, in higher education MBNQA (2011, 2012) pointed out that empowerment is to give faculty and staff the authority and responsibility to make decisions and take actions. It emphasises the importance of the involvement of faculty and staff in decision-making. It also added that empowerment is aimed at enabling people to respond to students' educational needs, to satisfy students and stakeholders on first contact, to improve processes and increase productivity, and to improve student learning and the organization's performance results.

An empowered workforce requires information to make appropriate decisions; thus, an organizational requirement is to provide that information in a timely and useful way.

Moreover, TQM culture in HE needed teamwork that is also renewed because significant changes would not happen except if lecturers and the other staff that are actively involved in planning and development of the change. The involvement of people who close to customer (lecturer-student, the service worker with the client) is the success peak of TQM. Everybody had to be involved in quality improvement by participating in the team (Sabihaini *et al.* 2010)

To encourage employee commitment and involvement, successful organisation place great importance on empowering their employees. In addition, employee's empowerment and involvement could be any effort related to move power and effective involvement of employees in the organisation's processes (Curry *et al.* 2002).

- **The principle of Customer-Oriented as basic principle of TQM**

Quality begins by considering the customer and is defined by the customer. Customer focus is one of the fundamental concepts of the TQM values, while TQM focusing

attention on satisfying the needs of both internal and external customers (BS 7850, 1992).

Thiagarajan *et al.* (1997) point out that one of the success indicators of organisations is their ability to align their corporate strategies to their customers' requirements. However, misunderstanding of customer expectations may lead to spending far too much money on sprucing up the appearance of a company's physical facilities when customer may be much more concerned with how convenient, comfortable, and functional the facilities are.

MBNQA (2011/2012) "education criteria" highlights faculty and staff satisfaction, where HEI should offer safety and health environment for its staff in addition to provide opportunities to contribute to their well-being, motivation, compensation and career development. It stressed "*voice of the customer refers to the university process for capturing student- and stakeholder-related information. Voice-of-the-customer processes are intended to be proactive and continuously innovative to capture stated, unstated, and anticipated student and stakeholder requirements, expectations, and desires. The goal is to achieve customer engagement. Listening to the voice of the customer might include gathering and integrating various types of student and stakeholder data, such as survey data, focus group findings, blog comments and other social media data, and complaint data that affect students' and stakeholders' enrolment and engagement decisions*" .

Additionally, in today's competitive academic environment where students have many options available to them, factors that enable educational institutions to attract and retain students should be seriously studied. HEIs may need to seek for effective and creative ways to attract, retain and foster stronger relationships with students.
Moreover, Higher education is viewed as business-like enterprise, where the students as a customer ask for a relationship with the producer(lecture) that delivers knowledge, skills and competencies he or she wants(Newton 2002). Educational processes in the form of lesson delivery, advising, counselling and project supervision

can be regarded as a type of service provided to students who assume the role of customer.

Accordingly, the evaluation of educational service quality is essential to provide motivation for and to give feedback on the effectiveness of educational plans and implementation.

As a result, students' opinions about all aspects of academic life and services are now sought by educational institutions worldwide, generally, in the form of a satisfaction feedback questionnaire. For example, Rowely (2003) identified four main reasons for collecting student feedback including:

- To provide auditable evidence that students have had the opportunity to pass comment on their courses and that such information is used to bring about improvements;
- To encourage student reflection on their learning;
- To allow institutions to benchmark and to provide indicators that will contribute to the reputation of the university in the marketplace; and
- To provide students with the opportunity to express their level of satisfaction with their academic experience.

Likewise, the importance of student satisfaction will be apparent when responding to the question: "What are the consequences of students who are dissatisfied?" When the environment is highly competitive, and students have more options, dissatisfied students tend to withdraw or transfer. However, while dissatisfied students may remain in the institution for lack of alternative options, they may not speak well of the institution to other potential students and may not be supporters of the institution after graduating (Shekarchizadh *et al.* 2011).

Despite the fact that service quality is more difficult to be measured than goods quality (parasuraman, *et al.*1985), Instruments for measuring service quality have been developed and validated. One of common instrument that used to measure the service quality is SERVQUAL which was used in this study.

Therefore, HEIs should consider and focus on satisfaction of their internal and external customers; such consideration and focus could be enhanced and supported by

further understanding of their needs through their opinions and perspectives e.g. by interviews, focus group and survey.

In the light of the above, the second pillar of the theoretical frame work is the assessment of students' satisfaction (they have been considered as the main customer of higher education).

SERVQUAL

In 1988 parasurman, Zeithaml and Berry developed a generic instrument called SERVQUAL to measure service quality based on input from focus groups. It is based on the assumption that satisfaction is found in situations where perceptions of service quality meet or exceed consumer expectations.

SERVQUAL is recognised as a tried and tested instrument that has been successfully applied in various different contexts. Yang (2006) point out that the SERVQUAL is one of the few tested instrument available to measure service quality from the customer's perspective, it was accepted by many service marking experts and was regarded as a typical applicable method to evaluate many kinds of service quality. It has been widely used by organisation generally for measuring customer expectations and perceptions of quality (Douglas *et al.,* 2006). It has been also used successfully in higher education research. For example;

Pariseau *et al.* (1997) utilised SERVQUAL instrument to measure quality in two small business school, using questionnaire for both students and faculty members.

Chau (2004) used SERVQUAL to assess the attitudes of students; the findings revealed that the dimensions of SERVQUAL are applicable to measure the quality of services that provided to the students.

Stodnick *et al.* (2008) have used the SERVQUAL instrument to measure the quality of classroom experience south-western university. The findings suggest that the SERVQUAL scale is reliable and exhibits both convergent and divergent validity.

Hughey *et al.* (2003) employed the SERVQUAL instrument to measure service quality of computer labs, carrying out two studies separated by a 2-year interval. In

both studies, the SERVQUAL items load onto three factors: staff, services, and professionalism.

Sherry *et al.* (2004) point out that the SERVQUAL instrument offered useful insights and is a good starting point to measure education quality.
O'Neil (2003) investigates the quality service provided to students in two stages: a) prior to orientation process and b) after one month. He used SERVQUAL to measure the difference between expectations and perceptions.

Vaughan *et al.* (2011) have utilised the modified SERVQUAL instrument to measure disabled student perceptions of service quality against the standard of excellence in Scottish university.

Shekarchizadeh, *et al.* (2011) have used the SERVQUAL instrument to assess the service quality perceptions and expectations of international postgraduate students studying in selected Malaysian universities.
To sum up, SERVQUAL is an instrument measures the difference between what is expected from a service encounter and the perception of the actual service encounter (Parasuraman *et al.* 1988): Service Quality (Q) = Perception (P) – Expectation (E)
"Quality Gap" is the phrase used to describe areas where service delivery fails to meet or exceed student expectations.

Dimension of Service Quality

PBZ (abbreviation of Parasuraman, Berry and Zeithaml) originally claimed that their service quality gap is characterized by five dimensions Javadi, *et al.* (2012). Table (3.1) highlights the definition of these dimensions.

Table 2.3.1 Definitions of Dimensions of Service Quality

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(Source: Javadi *et al.* 2012)

Each dimension is measured by four to five items (making a total of 22 items across the five dimensions). Each of these 22 elements is measured in two ways:

1- The expectations of customers concerning a service; and
2- The perceived levels of service actually provided.

Gaps in Quality of Service

Measuring the gap between expected service and perceived service is routinely used to watch the customer feedback.

It is shown to depend on the size and direction of the four gaps that are associated with delivery of the service.

The first gap is the discrepancy between customer expectations and management perceptions of these expectations. GAP 1 arises from management's lack of full understanding about how customers formulate their expectations on the basis of number of sources: advertising, past experience with the firm and its competitors, personal needs, and communications with friend.

GAP 2 may result from a lack of management communication to service quality or a perception of the unfeasibility of meeting customers' expectations.

GAP 3 is referred to as the service performance gap, because actual delivery of the service does not meet the specifications set by management. It can arise for a number of reasons, including lack of teamwork, poor employee selection, inadequate training, and inappropriate job design.

GAP 4 is the difference between service delivery and external communications in the form of exaggerated promises and lack of information provided to contact personnel. GAP 5 is the different between expected and perceived service, it measures the quality of service. Figure (3.3) the gap between customer expectations and perceptions is defined as GAP 5.

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Figure 2.3.2 Gap between customer expectation and perceptions (source: Atilgan Eda 2008)

As mentioned earlier, this instrument will be used in this study as the main tool to measure student satisfaction.

Criticisms of SERVQUAL

Notwithstanding its growing popularity and widespread application, SERVQUAL has been subjected to a number of theoretical and operational criticisms which are detailed below (Buttle 1996) :

- ✓ It is based on a disconfirmation paradigm rather than an attitudinal paradigm; and SERVQUAL fails to draw on established economic, statistical and psychological theory.
- ✓ There is little evidence that customers assess service quality in terms of P – E gaps.
- ✓ SERVQUAL focuses on the process of service delivery, not the outcomes of the service encounter.
- ✓ Consumers use standards other than expectations to evaluate SQ; and SERVQUAL fails to measure absolute SQ expectations.
- ✓ Two administrations of the instrument cause boredom and confusion.

2.3.2.3 Assessment Universities' Suitability to Implement TQM

The third pillar of this frame work is assessment of the academic and financial conditions in both of the case studies.

- ✓ **Academic Situation**

The development of quality of educational process is associated with evaluation of many academic conditions to be suitable to implement TQM, these including:

- ➢ Faculty staff- student ratio.
- ➢ Participation of faculty staff in scientific conferences.
- ➢ Appointment of faculty staff at universities.
- ➢ Admission systems at the university.
- ➢ Reviewing of the curriculum at the university.
- ➢ Cooperation between the research centre and other sectors.
- ➢ Academic guidance.

Faculty Staff- Student Ratio:

The student- staff ratio (SSR) in education is a quantitative method used to devaluate the allocation of resources (Murray *et al.* 1995). It refers to the number of staff in relation to the number of students. In other words, it is a measure of total number of students divided by the total number of staff.

In higher education this ration is used to measure of quality, for example, the Times Higher Education Supplement (THES) reported staff-student ratio in UK universities, including league table, selected elements of which are (Maben et al. 2007):

- Best ratio: 3.6 at the London School of Hygiene and Tropical Medicine.
- Next best: 5.9 at Cranfield University.
- UK average for Universities and other HE institutions: 16.8.
- University of Warwick is in 30 th place out of 118 institutions with SSR of 15.
- The worst recorded score was Middlesex University with 26.4.

The *Quacquarelli Symonds* (QS) world university is a ranking of the world's top 700 universities. For this ranking using six indicators in its ranking one of them is Faculty student ratio.

Jalote (2008) point out that the low student-faculty ratio (S/F ratio) is a central reason for the failure of the five Indian Institute of Technology (IITs) to make any significant impact on trained manpower needs of the country and consequently on industry as a whole.

Thus the staff- student ratio is portrayed as a proxy for 'educational quality', on the grounds that a lower ratio connotes more opportunities for students to interact personally and directly with their teachers. It is also sometimes presented as a measure of how institutional resources are being deployed.

Participation of Faculty Staff in Scientific Conferences

Staff development that improves the learning of all students is very essential. It provides the staff with knowledge and skills. It assists them in improving the quality of student work.

There is no doubt that supporting the participation of the researchers and teachers in international research projects and at scientific conferences will help the staff to deal with the quality issues. Universities should pay particular attention to its staff and provides them with access to important publication outlets and funding them to participate in this kind of conferences.

Engorgement and support of faculty staff to participate in scientific conferences, allowing researchers to reach more distant position, and ensuring access to telephones and computer-mediated communication will help the university to overcome isolation. For example, the American Society of Human Genetics (ASHG) encourages administrators and leaders in higher educational institutions to give appropriate credit for faculty who participate in formal outreach activities (Kung *et al.* 2012).

Appointment of Faculty Staff at Universities

Cooper James *et al.* (UNSCO) point out that when an educational institution requests to appointee a faculty staff, the phrase "quality teachers" should be used in place of the more traditional "qualified teachers". Whereas qualified teachers meet various licensure and certification requirements, quality teachers are those who positively influence student learning.

In this context, Cooper (2006) stressed "*Research in the late 1990s and early 2000s has lent support to the long-held belief that good teachers make a great difference to their students' academic achievement. When students have as few as two inferior teachers in a row, they almost never catch up academically with their peers. Thus, recruiting academically successful university students into teaching, preparing them well for the challenges of teaching, and retaining them in the profession have all become key goals in helping students achieve high academic standards. Attention has turned from concern over having a sufficient number of teachers to a concern about having a sufficient number of quality teachers"*

In this matter, the (UNSECO) point out that the recruitment of staff in higher educational institutions In developing countries tend to be more centralised than in such countries as the United Kingdom, Australia, and the United States, where recruitment is often handled at either the school or local area level

Thus, the university's recruitment and Selection Procedure should set up to a framework which will assist managers to ensure that the university attracts, selects and retains the most suitable candidates by using the most appropriate, efficient, fair, open and effective methods. Its commitment to achieving equal opportunities is

clearly defined throughout the recruitment and selection procedure and links closely to the principles of the university's equal opportunities policy.

The existence of a systematic framework supports the university's recruitment strategy which aims to attract high quality staff and improve the quality of appointments is very essential. In other words, soundly based and justifiable selection decisions help the University to fulfil its legal obligations and help avoid unnecessary employment tribunals. It also re-enforces the university's commitment to equality of opportunity.

Everyone involved in the recruitment and selection of staff should have a responsibility to ensure that candidates are treated fairly and decisions are made objectively and in line with the University's commitment to equal opportunities. Appointment of the faculty staff should be according to the knowledge, skills, and attribute needed to perform the job. So the aim of university should ensure that its recruitment, selection and admissions processes are transparent and focused towards their intended audiences.

Generally, the policymakers should be aware that the A well-qualified and highly motivated faculty is critical to the quality of higher education institutions.

Admission Systems at the University:

A fair and transparent admissions system is essential for all applicants. It is a system which provides equal opportunity for all individuals, regardless of background, to gain admission to a course suited to their ability and aspirations.

So, it is the aim of the university to welcome a wide range of applicants. The university is committed to providing clear, consistent, easily understandable and accessible information about entry requirements, admission systems, and conditions of offer, expected timescales for responses, fees, and finance.

Regarding this issue, the QAA pointed out "*institutions should assure that their selection policies and procedures are fair and implemented consistently. In developing their selection policies and procedures, institutions should be clear and open about the reliance placed on, and relative contribution of, prior academic*

achievement (demonstrated for example by examination results and qualifications), the results of Admissions to higher education additional testing or assessment (including the purpose, conduct and outcome of interviews, auditions and assessment of skill), and potential and relevant capabilities demonstrated by other means"

However, The UK Government, for example, has made it clear that it wishes universities and colleges to retain autonomy over their own admissions policies and the right to make their own judgements in assessing individual applicants. This is essential to maintaining academic freedom and should be welcomed. However, some researchers believe that a mechanism is needed to review progress in implementing its recommendations on fair admissions (www.admissions-review.org.uk).

In addition, the World Bank report (2008) discusses many admission systems around the world, and the conclusion of this report is shown in table (3.2).

Table 2.3.2: Typology of Admission Systems Worldwide

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Source :World Bank report, 2008

In the light of the above discussion, regardless of what type the admission system is adopted, consideration should be given to how the admission factors are communicated to applicants and who contribute to the selection decision.

The decision maker in an educational institution should aware that the admission system has a direct influence on the quality of the university output.

Curriculum Review in the University.

Curriculum is an organised programme of study for a given degree, diploma or certificate award, incorporating all matters such as academic staff requirements, duration of academic programme, admission requirements, content requirements and assessment process requirements

Moreover, the university curriculum is the province of the faculty. It consists of all academic programme content and requirements of the institution – that is, of all admission and graduation requirements for degrees, majors, minors, concentrations and curricula.

So, Institutions are under greater pressure than ever to provide courses that appeal to a broad mix of students and equip them for future employment. Keeping the curriculum responsive to changing demands is essential to any institution's strategy

Curriculum improvements reflect the intellectual expertise and achievements of the faculty. While revision and innovation may originate anywhere, originators of curricular proposals should immediately consult the affected faculty and departments.

In the light of the above, review and revision occurs at every point of the curriculum cycle. Whether developed at the course or at the program level, curriculum needs to be continuously reviewed and revised if it is to remain aligned, current, relevant to the work place, and responsive to the needs and abilities of the learners. The review and subsequent revision of curriculum may be undertaken informally as well as carried out in a more formal process at regular intervals.

The World Bank report of higher education in developing countries (2000) has recommended that the universities need to design, testing, and implementation of new curricula and academic programs continuously in order to cope with the labour market changing.

Cooperation between the Research Centre and Other Sectors

Universities and educational instaurations does not exist in a vacuum, it exists within an environment consisting of the actions of other players who are outside the business. One of the most important external environments is the society which consists of other sectors.

Thus, in order to provide a good services, positive relationship and cooperation between the research centre and other sectors must be developed.

One of the most essential criteria that been using to rank the higher institutions is the amount of researches that university conducted, as well as the quantity and quality of the researchers at the university.

Criteria of evaluating the academic condition

Table 2.3.3 academic condition criteria

Faculty members	• To what extent that the number of faculty staff is appropriate to the number of students in general and according to the need of every department (the proportionality of number of faculty members with the number of students) (SSA). • Commitment to scientific planning for determination of real needs of faculty members. • To what extent that the faculty members have an opportunities to participate in scientific conferences. • To what extent that the social services is available to the faculty staff. (the availability of social services to the staff members) • To what extent that the appointment of faculty members are in accordance with qualifications and experience as well as the need of the university. • To what extent that the curriculum is in line with the needs of society) • To what extent there is an ongoing review of the curricula to keep pace with changes that might occur.
Admission system	• To what extent that the admission system based on the ability of the students, need of labour market and the infrastructure and capacity of the university • To what extent there is academic guidance to students in general and new students in particular
Postgraduates and Researches	• To What extent that the plan and policies of researches and postgraduate is clear • To what extent there is coordination between the research unit of the university and the other sectors.

(Source; Author)

- ✓ **Financial Conditions**

The evaluation and development of financial conditions in the universities are very important element in the system of TQM implementation.

There is an important universal reaction of managers when it comes to money, namely, they do not have enough of it. They need and want more (Bentz 1997).

The higher educational institutions are supported from a variety of sources, it is depending on whether the institution is public or private, the public funded institution receive support from: Public appropriations, contracts with other agencies, donor or both, loans, gifts and income from sales.

On the other hand, the private institutions are financed by: Donation income, private investment, income-producing activities and the same sources of public universities. Allocation of resources in the education sector must put greater emphasis on investment expenditure. This can be achieved by reducing the proportion of current expenditure through reducing the ratio of administrative and non-teaching staff – whether in pre-university or university education – which absorbs a high proportion of the wage bill (which also constitutes most of the current expenditure).

Many observes attribute problem in higher education to funding shortages. For example;

El-Hawat (2007) point out that funding higher education in Arab countries is facing new challenges that growing for the following reasons:

- Most HEIs are unable to meet the increasing social demands for higher education or the support which is necessary for reforming and modernizing the programmes in order to cope with the challenges imposed by globalization and socio-economic develop.
- In view of recent national and international development, the role of the state in developing countries to finance public services including higher education is shrinking. Recent national and international reports refer to a continuous decline in financing higher education, especially in countries implementing a new structural adjustment and/or privatization.
- Management of HE budget in many Arabic counties are subject to daily administration instead of improving higher education infrastructure and research project.

El – Baradei**,** *et al.* (2004) in their assessment of education system has agreed some recommendations in order to improve resource utilisation and allocation including:

- Efficient construction and space utilisation of school building could save from 5 to 20 percent of costs.
- Reducing the ratio of administrative and non-teaching staff in all levels of education could also save a great proportion of the wage bill.
- At the university level, there are also various sources of inefficient spending which could be spared. Such as overstaffing of both teaching staff and administrative and support employees.
- The government should seek every way or innovation to reduce costs. Several studies have reviewed educational innovations to reduce costs and increase efficiency. Three broad types can be identified; first, those that depend on new educational technologies, which include the use of radio, television and self-instructional materials. Second, there are innovations within non formal education; third, innovations in formal sector provision
- The more economical use of teachers would take place through better time tabling to raise teacher outputs in terms of the number of students instructed over a period of time, and the use of classrooms and laboratories for a higher proportion of the school week or year.

In African continent, the World Bank report (2010) stress that "*the high cost of university education in Africa has been attributed to poor planning on the part of the institutions. The situation is made worse by their failure to exploit economies of scale, their high reliance on expatriate staff, the need to import books and equipment, the provision of student accommodation, and mismanagement of funds. These factors have not only increased wastage in higher education, but have also affected the quality and relevance of university education on the continent.*"

Based on the above discussion, Higher education institutions require sufficient financial stability to permit orderly development. Thus the evaluation of financial conditions is very vital for any organisation to be able to update its current system and meet the quality system needs.

Table (3.4) below highlights the set of criteria been used to assess the financial condition.

Table 2.3.4 the Financial Condition Criteria

Finical resources Availability	• Do the financial resources Are sufficient? • Does the university get the money allocated in timely manner without delay?
Usage of the financial resources	• Does the money allocated to the university using for up-to date references as well as subscribing in the International scientific journals? • Do the financial resources which allocated spent on efforts to improve quality, and to encourage those who engaged in such business? • Does the university makes a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality?.
Financial autonomy	• Does The university able to obtain funds from different sources, such as competitive funds, contracts with private companies, and donations from the non-profit sector?. • Does the university is less dependent on the government budget?

Source: Author

2.3.2.4 Summary

This section provided the analytical framework in which comprises a number of key TQM principles identified from literature review of TQM philosophy. The three pillars of TQM to enhance quality of HE were identified including: Assessment of Quality culture through (leadership, continues improvement, training and education, organizational structure, employee 'involvement and student stockholders), using SERVQUAL to evaluate and measure the student satisfaction and the assessment of financial and academic situation.

Also, this chapter offered the aspects and features of those key principles based on the TQM philosophy. The analytical framework and the aspects of TQM principles will help in the design of the questionnaire, and will support interpreting, analysing and discussing the research findings.

The next chapter will introduce the setting which this research will focus on, the Libya Higher Education.

Chapter three: Libyan Higher Education

3.1 Introduction

The demand for educational development in the Libya has been so urgent that the recent years have witnessed many attempts at reform looking at both expanding provision (the quantitative aspects) and improving the provision (the qualitative aspects).

This chapter discusses the historical, geographical, culture, religion and political background that influence the current HE environment in Libya. Also it highlights the structure of the educational system in Libya; the educational legislation and the educational structure. In doing this, the chapter provides an in-depth understanding of the Libyan education system in general, and then proceeds to discuss Higher Education specifically.

3.2 Country Profile

Libya is one of the largest countries by area in Africa, is situated in North Africa, with long borders on the Mediterranean Sea where the majority of the population lives. The vast portion of the country covered by the Sahara Desert is hardly inhabited. Libya shares borders with 6 countries. The population is 6 million (World Bank, 2005), 90% of them live in less than 10% of the area. More than half the population is urban, mostly concentrated in the two largest cities, Tripoli and Benghazi.

Libya gained Independence from Italy on 24 December 1951. The independence has affected all aspects of Libyan life; Education is not an exception, it was affected to a considerable degree, since this had never previously received any major consideration from the occupying forces controlling Libya.

Among foreign residents, the largest groups are citizens of other African nations, including North Africans (primarily Egyptians and Tunisians), West Africans and Sub-Saharan Africans.

Libyan is an oil-producing country, with its main income coming from oil revenue, as well as some petrochemical industry and agricultural activities. Country's oil resources account for approximately 95% of export earnings, 75% of government receipts, and over 50% of the gross domestic product.

Oil revenues constitute the principal source of foreign exchange.

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Figure 3.1 Libya Location

Source: http://gis.emro.who.int/HealthSystemObservatory/PDF/Libya/Full%20Profile.pdf)

3.3 Education System

According to the UNSCO (2004) report, the country has the highest literacy and educational enrolment in North Africa. The report has stated that the literacy rate for the population over 15 years is 86% (male 91%, female 81%). It has made substantial improvements in the past two decades, overtaking Tunisian adult literacy levels (of 71%), while cutting illiteracy among female youth from 39% in 1980 to less than 7% in 2000. Meanwhile, the overall combined primary, secondary and tertiary enrolment rate was 92%, higher than in any of the neighbouring countries. Education is compulsory between the ages of 6 and 15 years. Secondary education starts at age 15 and lasts for three years.

Education in Libya is free to everyone from elementary school right up to university and post-graduate study, at home or abroad. Schools are placed throughout the

country. The policy is to reach out even to the nomadic hard-to-reach areas, and mobile classrooms were introduced to cover all of Libya.

Two important goals of the Libyan education system are to contribute to the economic, social and cultural development of the Libyan society, by improving the skills and abilities of Libyans, and to rapidly raise standards of human development in the society (UNICCO 2004).

Despite much progress over the last 30 years, and good basic outcomes, the Libyan education system does not yet achieve its goals, including providing the training and skills that are required to drive the economy forward. Poor quality input and a number of severe structural challenges are negatively affecting the education system (Health system profile2007).

Moreover, regarding the financial issues, Libyan public expenditure on education is about 4% of GDP, which is around the average of Middle East and North Africa (MENA) countries (Mbendi 2006).

3.3.1 Structure of Libyan Education

There are five stages of the Libyan educational systems including: Kindergarten; basic education; intermediate education (Secondary); university education and post-graduate studies (Said *et al. 2004*). Figure (3.2) shows the educational structure in Libya:

Figure 3.2 The Libyan Educational Systems. S*ource: (Porter and Yergin 2006)*

- Kindergarten: for 2 years - it enrolls children aged 4 and 5 years;
- Basic Education: for 9 years - it enrolls pupils aged from 6 years;
- Secondary Education: it extends 3 years; it includes Specialised Secondary Schools and Intermediate Technical and Vocational Centres and Institutes.
- Higher Education: including Universities which lasts from 4 years to 6 years, and Higher Specialised Vocational and Technical Institutes which last 3 years.
- Postgraduate Studies: including Master's Degree and PhD (Doctorate) Degree and an advanced diploma in various specialisations.

The advisory committee for Educational and Training Planning (ACETP)

The Advisory Committee for Educational and Training Planning (ACETP) (International Bureau of Education, 1998) suggested goals to meet 21" century challenges as follows;

1. At basic education level, students should acquire 3 fundamental skills, reading, writing and arithmetic; and knowledge concerning cultural heritage, history, geography, capabilities and problems of Arabic Libyan society in particular and of Arabic nations in general; they should learn love and loyalty for the homeland.

2. At secondary level, the goals are to assist the development of religious and Comprehensive moral philosophy to guide their behaviour and the ability for logical thinking, objective criticism, and the achievement of basic education standards.

3- Higher education goals are:

- ✓ To train students to follow good religious and moral principles;
- ✓ To discover and encourage creative, scientific and research capabilities of Students and enable them to acquire the necessary skills.
- ✓ To provide society's need for an educated well-trained workforce in various fields of development.
- ✓ To achieve scientific and cultural advancement through developing modem sciences and technologies.
- ✓ To participate in strengthening Libya's scientific, cultural and research relationships worldwide.
- ✓ To serve Libyan society by participating in the restoration and renewal of its heritage, strengthening its Arabic and Islamic identity and achieving cultural, social, economic and military security and increased productivity

3.3.2 History of Libyan Higher Education

After Libya's independence in 1951, its first university which formed the foundation of the "Libyan University," was established in Benghazi. It was called the Faculty of Arts and Education and was followed in 1957 by the establishment of the Faculty of Science in Tripoli. At that time, the university's main objectives were no more than training teachers for intermediate and secondary education levels, and training employees for various government jobs.

Salam (1992) points out that one of the legacies of the Turkish and Italian colonisation of Libya is educational backwardness, from which Libyan society still suffers. Salam adds that in 1951, fewer than 10 Libyans had university degrees, and there were only four secondary schools with a total of 25 teachers in the whole of Libya. Only boys attended these secondary schools.

So, the contemporary LHE established officially in 1955 when the faculty of literature was born in Benghazi (Said 2005, AL-Teer 2005). Said (2005) adds that the number of students of this faculty was 31 students (all males).

In 1957, the Faculty of Economics and Commerce was founded, followed by the Faculty of Law in 1962. Later, in 1966, the Faculty of Agriculture was established. By 1967, the Libyan University witnessed further expansion as it annexed both the Faculty of Higher Technical Studies and the Higher Teachers Training College.

In 1970, the Faculty of Medicine was founded and in the same year, the Islamic University in Al-Bayda, was incorporated by the Libyan University under the name of the Faculty of Arabic Language and Islamic Studies. In 1972, the Faculty of Oil and Mining Engineering was founded then moved in the late 1970s to Brega Oil Terminal Complex.

In 1973, the Libyan University was separated into two independent universities; the University of Tripoli and the University of Benghazi. Later these universities were renamed: the University of El-Fateh in Tripoli and the University of Gar-Yunis in Benghazi.

Due to the increasing number of students enrolling in higher education since 1981(as shown in table 4.1) the university was restructured and the number of universities expanded to 13 in 1995, consisting altogether of 76 specialised faculties and more than 344 specialized scientific departments.

In the late 1990s, the Libyan authorities invited the private sector to play a role in the country's education system, since which time, more than 1,000 private primary and secondary schools as well as more than 30 private universities have been established (Rhema *et al.* 2010) .

Due to recent policy changes, the number of universities was reduced (in April 2010) to fourteen universities.

In general, there is a shortage of current reliable social statistics in Libya (Rhema *et al.* 2010) , but according to(National Committee for Libyan University 2010) , the

total number of students in Libyan Higher Institutes and Universities is 324,506 for academic year (2009-2010) including foreigner students, and more than 80,000 students are enrolled in the Technical Higher Institutions.

The figures which established by Assistant Secretary of Higher Education (2010) showed that the number of Libyan students who are studying outside the country reach to (9285) student who distributed on (30) countries. (2857) students among them study in different UK Universities, while, (1401) in US universities.

The current status of Libyan HEIs as is follows (National Committee for Libyan University, 2010): Total number of universities is (14) universities and the number of faculties are (188).

Moreover, in 2002 there were nearly 5,000 students at the Master's level, 49 at the Doctoral level and 580 enrolled in medical schools El-Hawat, (2006)

Table 4.1 provides detailed statistics of students and academic staff members within the Libyan Universities.

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Source: Higher Education Secretary, 2010

3.3.3 LHE management system and structure

Libyan HE system can be seen to have evolved and passed through five distinct phases since its initiation in 1955, as follows (Alfanish *et al.* 1998).

Pre-1969-1973: The predominant management system was Syncretism which is a combination of the Bureaucratic and Collegial system. This system is based on all the University's board being colleagues and equal in their knowledge and professionalism, with the decision-taking being by agreement among them.

- ✓ 1973-1983: The notion of People's Committees notion was introduced within Libyan HEIs. This system is called the democratic system. In it, the University is managed by a people's committee. The University and Faculty Boards became people's committees, developing goals of their individual units in tune with the mission and policy of the government.
- ✓ 1983-1991: The student management system era prevailed. In this period the students were managing the University's affairs. The Dean of the University became a student rather than a member of academic staff. This system lasted for around eight years and was considered as the worse management system (Alfanish *et al.* 1998).
- ✓ 1991-2011: The democratic style prevails as the management system. However, the Dean of the University (Called Secretary) is an academic appointed from the General People Committees (GPC) nominated from the Secretary of Higher Education.

In the light of above, The HE in Libya has witnessed rapid development in both public and private sector. However, this sector was the subject of many changing including: names, policies, responsibilities and HE body itself. The instability of higher education bodies has been criticised, and also considered as one of the main reason which affected the quality of higher education. The university' regulations are continuously changed, this leads to disregarding of such regulation among different university segments (Al-Teer 2006).

For the up until 2011, (before the 17 /2 revolution) the University is managed by the University's People's committee, which is led by a Secretary (Dean). The Faculties are managed in the same way, each Departmental Head is a member in the Faculty's

People's Committee, and each secretary of each Faculty's People's Committee is a member of the University's People's Committee. The students and support staff are also members of People's Committee. According to the law of the People's Congress and People's Committee, the University' People's Committee as well as the Faculty's People's Committee are appointed for three extendable years.

Moreover, the public committee members is the highest authority which provides a university's plan related to its objectives (GSUM 2005). In addition, the committee delegates the university to manage its financial recourses, approving educational plans, providing and approving academic degree, and compiling reward and recognition regulation.

On the other hand, the Libyan university administration still comes as bureaucratic and disorganised e.g. many administrational procedures are accomplished only through social relations or common interest. Thus, this impacts negatively the academic programmes and other related services provided by the university (Alfnish *et al.* 1998, Al-Teer 2006).

Latiwish (2003) describes the management and structures of higher education institutions as (top-down management point). He divided this kind of management into two main elements: top-down political instructions and top down educational instructions;

- ✓ ***Top-down Political Instructions***

Political instructions come from the government, and sometimes even from the president's office. They choose heads and deans of universities and faculties, as the Committee of Higher Education and the universities have no authority to even suggest candidates for these positions. The Committee of Higher Education has the responsibility for obey the political instructions, such as those to employ or to cancel teachers' contracts, and normal education management. This system has been in place for more than 40 years and it became a part of the traditional Libyan employment system.

- ✓ ***Top-down Educational Instructions***

List of normal and day-to-day operation been provided by the Committee of Higher Education including the start and end dates of academic years, faculty entrance scores, and authorising university heads and deans to the other academic managements. This method of management has increased the gap between departments, faculties and the university. Some faculty deans try to apply their own perspectives and beliefs of managing their faculties, such as choosing department heads for personal or social reasons (El-Hawat 2003).

Figure (3.3) shows the last structure (before the Revaluation) of the Libyan universities named: Public Committee of University (PCU).it consists of: academic staff members, students, and employees and workers.

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Figure 3.3 public committee of university (university leadership) (source; GSUSM , 2006).

On the other hand, Higher education is governed by the General Peoples' Committee for Education & Scientific Research (GPCE&SR). Within the GPCE&SR three bodies are responsible for the supervision of and the coordination among higher education institutions: (1) the National Committee for Universities, (2) the National Committee for Technical & Vocational Education, and (3) the National Committee

for Private Education. Moreover, higher education sector is completely financed by GPCE&SR, except for private universities. The GPCE&SR allocates the annual budget for each university and technical collage according to the budget suggested by these institutions, and according to the criteria set by the GPCE&SR, such as the institution's population, current infrastructure, needed construction and facilities. In contrast, private higher education institutions are self-financed. Their main financial resources are from students' fees and services provided to the public.

Many studies have been conducted suggested some recommendations to improve the quality of LHEIs. For example, Al-Badree (2006) points out that in order to improve the Libyan Universities' administration; these following points should be considered:

1- The Libyan HEIS should be independent of the government in both administration and financial entities.
2- Work towards stability and predictability of academic and administration of the university to be able to implement plans and policies.
3- Libyan University should be managed through total quality management approach in academic and administration parts.
4- Work towards constancy and stability of regulation and laws that manage and orgnise the Libyan universities.
5- Work towards to reduce the centralization to ensure that the university has the flexibility to make own decisions, and solve the problems that could be faced.

3.3.4 Types of HEIs, Programmes and Qualifications

There are three types of tertiary institutions in Libya:

- **University**

Universities offer three types of qualifications. The first degree offered is the bachelor degree which requires four years of study in most programmes after obtaining the secondary school certificate. Bachelor degrees in dentistry, pharmacy, veterinary medicine, engineering and architecture all require five years of study, while the bachelor degree in medicine and surgery requires six years of study and the curricula closely follow the British model (Clark 2004).

Universities also offer programmes leading to Master's degree in most specialisations which requires, on average, 2-3 years of study after obtaining the bachelor degree. The master's degree programs are mainly offered at the large universities, particularly Gar-yunis , Al-Fateh and the Academy Of Graduate Study.

Obtaining a Ph.D. degree in selected specialisations and at certain universities requires three to four years of study and the submission and defence of a dissertation. However; only a few students gain their PhDs from Libyan universities. In academic year 1999/00, only100 students had obtained PhDs from the all Libyan universities (Clark 2004). Most of the students are in fields such as Arabic, Islamic studies and the humanities. Libyan universities have not yet started doctoral programs in science, technology and engineering. As a result many students pursue their doctorates abroad.

- **Technical Colleges**

In November 2009, 16 high vocational centres and institutions were converted into high technical colleges. These colleges offer "technical bachelor degrees" in certain specialities, which requires three years of study after obtaining the secondary school certificate.

- **Higher Vocational Institutions**

Currently, there are 63 high vocational institutions in Libya. These institutions offer programmes in many vocational specialities for a period of three years after obtaining the secondary school certificate. Graduates of these institutions are awarded high vocational/technical diplomas.

3.3.5 Admission to Higher Education:

Quality in higher education is affected by the quality of its inputs, which may be of two types internal or external. For example, Bubtana (2007) commented "*Quality in universities and institutions of higher education is normally judged on the basis of various inputs and internal factors, i.e. the quality of students programs, faculty and research*".

Students are the most obvious external input to influence the process of higher education. Internal inputs are represented by teaching and learning methods, staff members, availability of research resources, and type of management.
So admission to higher education institutions is one of the vital process that ensure the input (student from secondary schools) be able to add value in terms of quality. For example QAA (2006) stressed "

"Institutions' policies and procedures that reflect the admissions process in its entirety for all categories of student, including full and part-time undergraduate and postgraduate study, will help to demonstrate that policies and procedures are fair and can be implemented consistently. Policies and procedures that provide clear and explicit information about how applications from prospective UK and international students, from both within and outside the EU, are appropriately accommodated in the recruitment and admission process will also help an institution to assure itself that its policies are being implemented consistently".

In Libya, admission to the university program requires the Secondary Education Certificate, awarded at the end of the of the secondary school cycle. Since 1990s, all universities require a score of 65 present or more on the secondary education examinations to enrol in a university program. Students who have an average below 65 percent are admitted to higher training and vocational institutes (Clark, 2004). However, the Higher Education Minister determines the regulations for students' admission to higher education institutions based on the percentage of the results of the exams of the secondary school. For admission to graduate studies, students are required to have bachelor degrees, and take a placement exam and/or be interviewed
In fact, the admission system in Libyan university is one of the most complex processes facing the higher education, because the capacity of these universities is not enough for thousands of applications.

3.3.6 Organisation of the Academic Year and Curriculum Content

LHEs are responsible for determining the length, beginning and end of the academic year. Some institutions follow the semester system and others follow the whole academic year system. However, the academic year starts at the beginning of October

and ends in June or early July. Some private universities provide a summer semester. One semester usually lasts for 16 weeks and ends with an exam period, while the end-of-year exam is more formal, which means that exams and committees are scheduled at faculty and department levels.

Also, General Planning Board Report (2002) points out that the curricula provided by Libyan HEIs in general and postgraduate programmes in particular must be totally changed. Furthermore, Alfnish *et al.*, (1998) provide the key characteristics of educational programmes and curricula offered by Libya HEIs:

- *Majority of curricula afforded by Libyan HEIs do not fulfill the needs of society and are unable to contribute in solving its problems*
- *Lack of balance between theoretical and practical parts of the curriculum provided particularly by applied science faculties.*
- *The compilation and delivery of the required syllabus is subject to the teacher's beliefs that ultimately lack the enthusiasm and desire to renew and develop his knowledge. This creates major differences in the materials of same subject offered by peer departments.*
- *There is a gap between curricula provided and students' needs.*
- *There is a gap between curricula offered by Libyan HEIs and the development plans and projects provided by the country.*

Moreover, traditionally, programmes and curricula are developed and approved by faculties and universities. However, recently there has been a trend towards centralising the reform of programmes and curricula, which aims at standardising about 60-70% of the content of all subjects at the university level. This was done through meetings carried out at various universities and with the heads of the various fields of specialization of the departments (European commission 2011).

Generally, private universities follow curricula of public universities.

Programmes and curricula in technical colleges and higher vocational institutions are more flexible. During a whole-academic-year-system, students are required to study 10-12 courses each year, while in the semester-system, a total of 130–136 credit hours

are required on average for the Bachelor degree, which may go up to 150 credit hours in the field of engineering.

3.3.7 Faculty Member Staff

Faculty members are required to hold master or PhD degree from institutions recognised by higher education minster. The following ranks are used for faculty members:

- Instructor: the first rank for faculty members holding master degree.
- Lecture: the first rank for faculty holding PhD. degree, and the second of master degree holders after four years of teaching as an instructor and at least one publication.
- Assistant professor: faculty member with PhD. Degree three years of experience as lecture and at least three publications. Or faculty member with master degree, four years of experience as lecture and at least three publications.
- Associate professor: faculty member with PhD. Degree four years of experience as assistant professor and at least four publications.
- Professor: faculty members with PhD. degree, four years of experience as associate professor and at least five publications.

3.3.8 Philosophy and Objectives of Libyan Higher Education (LHE)

"*Education for all*" is one of the main principles of education policy in Libya, and the general philosophy of the Libya education is:

- Education is a right for every citizen free of charge.
- Basic education (primary and preparatory) is compulsory.
- Education services are to be available to villages and remote areas through mobile class rooms.
- The educational structure should be linked with occupational structure to meet the requirements of the economic and social development plans to the country.
- Education should achieve freedom, quality and unity.

On the other hand, the main objectives of LHE are the following (NCETR 1996):

- To satisfy society's needs for high-level professional personnel for all sectors of national life.
- To perform theoretical and applied research.
- To organize and prepare training courses and applied programmes in the continuing education.
- To organize conferences and symposia, as well as maintaining academic relationships with research associations inside and outside the country.
- To generate adequate numbers of scientists, researchers, and faculty members.

In addition, Ghafir (1987) referred to the philosophy and objectives of education as they had been expressed on the 0' anniversary of the revolution:

"The philosophy of education in the Libyan Arab Republic crystallized after the September first revolution and the line and aim of the Ministry of Education were defined. The Ministry's objective has been to prepare a generation believing in its Islamic religion as a code of ethics and conduct and having pride in its Arab origin and heritage. At the same time it has sought to ensure equilibrium between graduates of education institutes and the country's requirement of qualified manpower at every level of leadership".

3.3.9 The Libyan Education and Development Needs

Libyan universities (like other Arab universities) are criticised because they focus on quantity of students rather than quality of education, and also they graduate a large number of students with low scientific efficiency and knowledge (El-hawat *et al*. 2004).

El-Hawat (2007) point out that some of the main factors that have been identified as straining higher education in the region include the following:

- Increase population growth and the massification of secondary education;
- Inadequate financial resources;
- Inflexible and centralised management;
- Lack of diversification in the programmes/and institutions of higher education;
- Inability to meet students' needs;

- Weakness of the links between higher education institutions, general and secondary education institutions, local communities and societal and human development needs.

Additionally, Al-Teer (2006) points out that the increase and rapid establishment of many universities in Libya does not necessarily indicate that Libyan higher education provides good quality services. On the other hand, most of the public universities encountered a lack of facilities particularly in the applied sciences faculties (Al-Teer, 2006, Abodeeb 2006). For example, the number of students enrolled in the dental faculty is 5000 in the academic year 2001/2002 while the capacity to handle students by the faculty was not more than 35 places.

Likewise, Alfnish *et al.* (1998) point out that although the universities' infrastructure and facilities still the same since 1990 the number of enrolled students in LHEs has increased dramatically.

Said *et al.* (2004) pointed out that the university and higher education level in Libya, as in other Arab states, is characterised by some properties that might prevent it from performing the desired functions and quality. Those properties are considered as obstacles facing such education. Among these properties are the following:

1- Increase the number of students enrolled in higher education compared to the population. It is as a result of economic development, cultural and social change society's perception of the value of higher education.
2- Although, there is a lack of job opportunities to students graduated from social and behavioural specialisation , the number of students enrolled in such has increased.
3- Although the good economic income for individual and the society, there is lower figure of intermediate, technical, vocational and hand - craft jobs.
4- The educational acquisition has declined in some specialisation due to the lack in the educational supplementary instruments, and the unsuitable interface for the process of educating and learning.

5- Many of the university staff members are not educationally trained for the teaching process despite their specialized scientific skills that might be distinguished.

6- The lack of standards for choosing university staff members and the need for increasing number of teachers due to the increasing number of students and universities. Also, the different study systems used by the different university faculties (i.e. semester and the academic year systems). All of this and more led to the existence of some unqualified university teaching staff members.

7- The absence of fixed contracting standards with foreign teaching staff members opened a way for unqualified teachers to creep into the university teaching process.

In addition, the *National Report of the Development of Education in Libya* addressed some difficulties affect the affect the teaching and learning in higher education including:

- ✓ Difficulty in preparing teachers capable of teaching the new subjects and curricula.
- ✓ Difficulty in holding successful courses for preparing large numbers of basic education teachers, to be notified of the goals and philosophy of change, and the updating taking place in the curricula.
- ✓ Difficulty in finding the national specialists and experts, on whom the educational authorities can rely to set programmes and curricula for some educational and training subjects.
- ✓ The need for performing special studies for evaluating the educational and training system, for the purpose of analysing it to find out the aspects and reasons behind failure, and cases and elements of success. Also observing the standards that should be used in measuring the progress in achieving the determined goals.
- ✓ Difficulty in planning for improving and upgrading of the educational training, administrative and technical leading members; this makes the number of training courses in this field so few and does not fulfill the needs.

Regarding to this issue, *UNESCO Education Advisory Mission 1994, analysed the procedures and classrooms activities and summarised:*

1- Instructional techniques at the Libyan schools are still traditional, teachers provide information and learners have to hear and memorize. The active teaching methods to implement the educational objectives in practical manner are negligible. Teachers have to instruct at a high rate in order to deliver the overloaded curriculum. They cannot monitor the quality of students' learning and achievement. More interest is attached to the subject content that to its approach.
2- Educational management suffers from lack of competence, seriousness and continuity. It is often ineffective and weakens the overall educational outputs.
3- The number of students per class is still high in a large number of urban schools. It varies from 30 to 60 students. Teachers and school principals do not hesitate to complain about this, because they regard this as a barrier to effective educational achievement.

In addition to those difficulties, the Centre of Quality Assurance and Accreditation of Educational Institutions in Libya through exploration visits to some higher education institutions revealed that there are some challenges facing Libyan higher education institutions (Tamtam *et.al.* 2011). These challenges play an important role in implementing education program in Libyan universities. Moreover, Libyan universities are not able to achieve the higher education system goals because of these challenges. These challenges cab be listed as (Hamdy 2007):

1. There is a problem in having material source for universities' programs and service. So that, these programs cannot last for long times.
2. There is a problem in putting strategic plans that are and sufficient for the short-term objectives.
3. There is a problem in selecting sufficient academic leaders who are able to achieve the goals of the higher education system in future.
4. There is a problem in defining the vision and the mission of the universities or colleges or departments.

5. There is a problem in developing and training programs of faculty members that have an impact on the quality of higher education system.
6. There is a problem in understanding the meaning of quality that plays an important role in the education process negatively of the higher learning institutions.
7. There is a problem in making decision within universities regarding the duties of faculty members of the higher learning institutions.
8. There are no enough practices for faculty members and stuff that play an important role in creation and activation during the education process of the higher learning institutions.
9. There is a problem in clearing the organizational structure of universities as well as the policy and administration of the higher learning institutions.
10. There is a problem in developing plans for improving the education process due to the instability of the administration, regulations, and systems of the study programs of the higher learning institutions.
11. There is a problem in narrowing the powers of leaders at all levels of the higher learning institutions, which has an impact on improving the quality of education. So that, the structure of the higher learning institutions is always changing, and it is difficult to be improved.
12. There is a problem in developing and improving the academic programs in the higher learning institutions due to difficulties in the process. These difficulties are due to quantitative dimensions of education quality and the spread of the institutions in a wide geographical area.
13. Many of problems that have accumulated for a long time need to be solved.
14. There is a problem in establishing a relationship between the higher learning institutions and the labour market in Libya.
15. There is a problem in linking undergraduate and graduate programs with the labor market. So that, the education system can greatly shapes the future of the students and the industry as well.
16. There is a problem in identifying the areas of research.
17. There is a problem in providing developing and equipping laboratories and libraries. That will play an important role in making sure that the education

system is fully equipped and backed with relevant information sources rather than subscribing to periodicals and academic journals.

18. There is a problem in developing the methods of learning, teaching, and studying. That has an impact on the quality of education process, and on the omission of the use of self-learning skills such as: analytical thinking, problem solving, and creativity, innovation, and research skill.

The Libya government in general and ministry of Higher Education in Libya have decided to move away from mechanistic to a holistic and pay attention for quality rather than quantity. Thus, Centre Center for Accreditation & Quality Assurance for Educational Institutions was establishment in 2006. The Centre is responsible for the recognition and equivalence of diplomas, accreditation, and quality assurance of the public and private higher education institution

According to the GPCE&SR the main aims of this centre are:

- To spread the quality culture through the universities and other higher educational institutions in Libya.
- To suggest the general policies for performance evaluation and quality assurance for all the LHEIs.
- To set criteria foundation for academic accreditation based on the general polices of HE.
- To make decisions about HELs accreditation, and to improve its programmes according to these criteria.
- To encourage the LHEIs to improve their activities, and its academic program.
- To encourage the competition between the Libyan HELs in order to develop and improve the scientific researches at these institutions.
- To ensure that the procedures of establishment new LHEIs are based on accreditation requirement.
- To build a good relationship and cooperation between LHEIs and counterparts in the world.

3.3.10 Assessment of Students in Libya:

As mentioned earlier, there are two systems of study in Libyan universities which is half year (semester) system and the full academic year (Alfanish *et al.* 1998).

In addition, most of Libyan universities applied both systems in their faculties. In spite of advantages and disadvantages of each system it was found that applying both of them in one university hinder educational processes from the following point of views (Alfnish *et al.* 1998):

- Start and end of the study
- Enrolment of new students
- Examinations' processes
- Vacations of staff members and students

Also, if the systems of study are different in peer faculties, this will not give opportunity for students to move from faculty to another.

Additionally, unseen exams are the main method adopted to assess and evaluate the performance of students in the Libyan Universities (Alfnish *et al.* 1998). These exams are divided into two categories; two to three midterm exams and final exam. The percentage of midterms is between 40%-%50% and the rest is for the final exam. Such exams are managed by special committees comprising a number of academic staff members. The level of success of students is according the following scores:

- Excellent from 85%-100%
- Very Good from 75%-84%
- Good from 65%-74%
- Pass from 50%-64%

If the student's score is between 35%-49% he/she fails and described as weak, and if student's score is less than 35% it is regarded as very weak. Such scores are critical for student, because he/she might be dismissed from the faculty.

Furthermore, Abozakhar (2006) mentioned that in the full academic year system, there is a lot of negative aspects include:

- The students know that the evaluation will be in two hours at the end of the year. This leads them to delay their study to the last minute.
- If the evaluation occurs at the end of the year only, this leads teachers not to be serious to follow students and evaluate them continuously during the year.

This indicates that such methods and ways of students' evaluations are ineffective. Thus Libyan universities should adopt a students' evaluation or assessment philosophy that encourages students to gain knowledge in an effective manner (Abozakhar 2006).

3.3.11 LHEIs and Labour Market

The importance of HE is wider than providing a specific theoretical and practical curriculum. Also, it develops students' skills, knowledge and makes them more capable to deal with future jobs. Swafy *et al.* (2003) pointed out that HE systems in developing countries are focused on certifications and qualifications (Diploma Disease) and not to deliver skills and knowledge to their students. This means that the criterion for obtaining a job is qualification and not skills and capability. Swafy *et al.* added that the examination systems in such countries are designed to assess students' memorisation and not their skills. Consequently, most developing countries encountered the problem called "Educated Unemployment". This indicates that there is no link between educational programmes provided by HEIs and the labour market needs .Libya is not exception, where there is no link between the out comes from the education systems and the needs of the labour market as mentioned in the chapter one. Playfoot (2011) in his report about Libya stressed "*Rapid expansion is planned in the oil and gas industry; increasing human resource requirements also exist in the financial sector. Evidence suggests that while the requirements are becoming clear, there are concerns over the ability of the current education system to deliver against those requirements".*

Furthermore, Ali (2006) mentions that despite faithfulness and good intention towards developing Libyan HE, this sector still graduates a high number of students with low skills and capabilities. Ali considers that the gap between educational programmes offered by Libyan HEIs and the rapid changes in occupations' nature is one of the important factors to fulfil the labour market needs.

Points out that the number of job seekers in Libya has dramatically increased from 26.4 thousands in 1995 to 95 thousands in 1999 (Ali 2006). it should be noted that

this number does not represent the whole number of job seekers since many of them did not register in workforce office. Ali comments that this indicates that there is a gap between the preparation of human resources and labour market needs. In addition, the ratio of job seekers who graduated from HEIs in Libya represents 22.4% out of total job seekers registered in the workforce office. Table (4.2) illustrates the number of job seekers from males and females who holds Bachelor, Licentiate, and High Diploma.

Table 3.2 job seekers from Libyan HEIs graduates

Qualifications	Male	Female	Total	Percentage
Bachelor	5009	3895	8908	9.4
Licentiate	2542	3704	6246	6.6
High diploma	3296	2777	6073	6.4
Total	10847	10376	21227	22.4

Source adopted Ali, 2006

In addition to the lack of co-ordination between HEIs and the needs of labour market, the co-ordination among Libyan HEIs is required (Al-Gazal 2006). He adds that many Libyan HEIs have the same faculties particularly in social science which lead to the accumulation of student numbers in same specialties.

In this context, MBQNA (2004) considers agility is an important aspect in HEI effectiveness. This indicates that HEI should respond in a fast and flexible way to the needs of its stakeholders including labour market. Also, HEI should involve and listen to its stakeholders and address their expectations.

3.3.12 Summary

This chapter has introduced the general background of the Libyan education in general and higher education in particular. Also, this chapter has discussed a number of subjects addressed by many Libyan educators. Such subjects could influence the improvement of services and activities offered by Libyan HEIs. Those subjects are; the quality needs, university leadership, characteristics of Libyan HEIs curricula, students' assessment methods, teaching and research, and Libyan HEIs and the labour market. Finally some key problems encountered LHE were highlighted.

The next chapter will discuss the research methodology, it will describe the research methodology employed to answer the research questions posed within the thesis, and to meet the aim and objectives of the study.

Chapter Four: Methodology

4.1 Introduction

This chapter aims to provide a broad explanation of the methodological issues regarding this research. It describes the research methodology employed to answer the research questions posed within the thesis, and hence, meet the aim and objectives of the study.

Gardner, *et al.* (2002) argue that within every research project there is a need to develop a logical approach to undertaking the research, and a set of activities or methods that will facilitate the collection and analysis of data relevant to the issue under investigation.

Additionally, Adam *et al.* (2000) stated that research methodology is the overall approach, and within that the individual research methods and tools used to meet a given research objective. Thus, Selection of an appropriate research methodology and data collection method techniques depends on clear and unambiguous statement of the research aim and objectives.

It is important to mention that the methodologies, like theories, cannot be true or false, only more or less useful (Silverman 1993).

It was mentioned that the main aim of this research is to propose a model for effective Total Quality Management (TQM) implementation in Higher Education (HE) applicable to the Libyan context. Therefore, this chapter includes an overview of research philosophies, approaches, research strategies, and then details the particular methods of data collection and data analysis techniques used in this research, along with the rationale for making specific choices. In addition, the chapter also discusses the development of the research instrument and its pilot implementation.

4.2- What is Research?

There is agreement that research is a process of enquiry and investigation conducted in a systematic way in order to increase knowledge (Hussey *et al.* 1997). During this systematic process, the investigator must use appropriate methods to collect and

analyse the relevant data and s/he must address a research problem. Hussey *et al* (1997) summarised the purpose of research as follows:

- To review and synthesise existing knowledge
- To investigate some existing situation or problem
- To provide solutions to a problem
- To explore and analyse more general issues
- To construct or create a new procedure or system
- To explain a new phenomenon
- To generate new knowledge
- A combination of any of the above.

Thomas (1999) states "*The object of research is to determine how things are as compared to how they might be*".
Research is also a disciplined inquiry approach to the study of the problems (Gay *et al.,* 2003).

Since there are different kinds of problems, different types of research are needed to solve these problems.
Stringer (2004) point out that research is a form of transformational learning that increases the "stock of knowledge" that helps people to deal with their lives more effectively.

The fields of education and higher education have witnessed plentiful activity in the research area, whether these researches concerns education directly or some related field. Thus, educational research has been influenced and supported by research in the social sciences. Consequently, educational research is in character similar to social sciences research. Bassey (1999) was far more specific in defining research in education as:
"Educational research is critical enquiry aimed at informing educational judgements and decisions in order to improve educational action".

4.3 Research Aim and Objectives:

4.3.1 Aim of the Research:

The aim of this research is to propose a model for effective Total Quality Management (TQM) implementation in Higher Education (HE) applicable to the Libyan context.

4.3.2- Research Objectives

- To investigate the current best practices and experience of TQM implementation in the world class university.
- To investigate the extent to which the (LHEIs) adopt the principles of TQM.
- To evaluate and measure the customer perception of quality service.
- To propose a model for TQM implementation appropriate to the Libyan context.

Research Questions:

- What are the current beast practices of TQM in higher education?
- Do the Libyan universities adopt TQM elements? If yes to what extent?
- Are students satisfied with services quality offered by LHEIs?

4.4 Research Process

Educational research could be summarised in five main steps (Wiersma *et al.*, 2005) including:

Identifying the problem; reviewing information; collecting data; analyzing data and drawing conclusion. In this study, the stages in the research process are described as in figure (5.1):

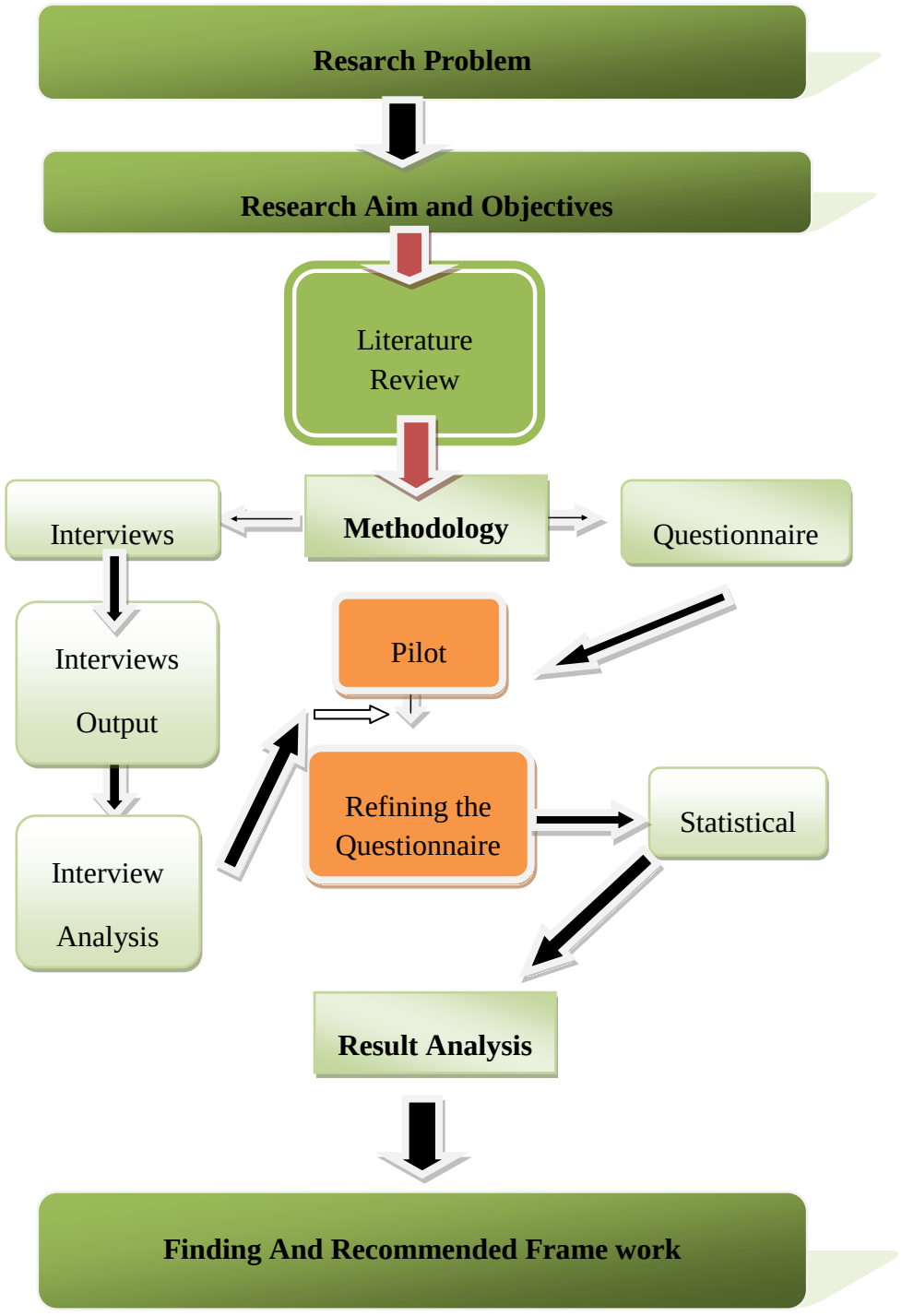

Figure 4.1 Research Process (Author)

The first stage in the research process is the clear identification and formulation of the' problem', where the quality of Libyan higher education is core of the research problem. A prior review of literature related to the development of education system

in Libya and the challenges facing it and the importance of management of change was undertaken.

In order to accomplish the research objectives, researchers are expected to employ suitable methodologies.

At the preliminary stage, before deciding on the methods and after the identification of the problem, the aims and objectives of the research had to be clearly determined and the value of adopting one or more research methodologies had to be assessed. The methodology selected for any research project must be appropriate to the goals of the research and for answering the questions.

The second stage is to establish a clear understanding of the existing body of knowledge in their specialisation area, which should come through an extensive literature review (Saunders *et al*. 2003, Sekaran 2003, Yin 1994, Yin 2003). To identify gaps in knowledge in the field , literature review is to be conducted , and to enable the researcher to know and understand the Total Quality Management (TQM) concepts, theory, models, knowledge and information provided in this field both in general and in Higher Education (HE) by many authors which include quality gurus, experts, and writers.

In order to understand the current in the field, library search, electronic journals, conferences papers and internet search were used to develop the literature review.

In addition to these sources the researcher has conducted two field visits to American university in Dubai and M.sRamaiah school of Advnced studies in India.

Consequently, this literature review serves as the foundation for the analytical framework (Sekaran 2003) which is used to generate the questionnaire and interview protocol for data collection. Furthermore, the review is used to facilitate the discussion of the research findings, in addition to the suitable methodology to conduct the research.

4.5 Research Philosophy

Research philosophy is related to the development of knowledge and the nature of the knowledge, and it contains important assumptions about the ways in which the

researcher views the world (Saunders, *et al.* 2007, Collis *et al.* 2003). Easterby-Smith *et al.* (2004) emphasised that understanding the philosophical issues is very important and helps to clarify the research design to be imposed. There are many research philosophies in social science.

However, generally, there are two philosophies as being used in social science, these being Positivism and Phenomenological (Easterby-Smith *et al.* 2004).
According to the positivist philosophy, knowledge in science can only be gained from direct experience and observation (Robson 2002).

Easterby-Smith *et al. (2004)* described positivist research as *"the social world exists externally ... its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition".*
This approach is predisposed towards the use of questionnaires for collecting data and analytical statistical analysis such as hypothesis testing, random sampling, aggregation, precision and measurement (Stiles 2003).

Phenomenology is a newer philosophy and stems from the view that 'reality' is not objective and exterior but is socially constructed and given meaning by people. Phenomenology focuses on the ways that people make sense of the world, especially through sharing their experiences with others via the medium of language (Easterby-Smith *et al.* 2004).

Easterby-Smith *et al*. (2004) summarise the differences between positivist and phenomenological philosophies as shown in Table 5.1.

Table 4.1 Contrasting Implications of Positivism and Phenomenology

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Source: Easterby-Smith et al. 2004

As shown in table (4-1) the fundamental idea of positivism is that the social world exists externally and that its properties may be measured by using objective methods rather than being inferred subjectively by using observation or intuition (Easterby-Smith *et al.* 2002). According to Gill *et al.* (2002) and Collis *et al.* (2003), this philosophy is characterised by five distinguishing features: it is deductive (theory tested by observation); it seeks to explain causal relationships between variables; it frequently utilises quantitative data; it employs controls to allow the testing of hypotheses; it uses a structured methodology to facilitate replication.

The social sciences, which had initially adopted positivism as they were emerging towards the end of the nineteenth century, transferred towards the phenomenological paradigm. This transferring from positivism towards phenomenology was also evident in much business research, but in latest decades there has been a move among researchers to develop methods and approaches called triangulation which provide a

middle ground and some bridging between the two schools' viewpoints (Easterby-Smith *et al.* 2002).

Moreover, Quantitative and qualitative methodologies are usually connected with Positivism and Phenomenology paradigms respectively (Mangan 2004). Quantitative data can assist with the qualitative side of a study during design by finding a representative sample and locating deviant samples, while qualitative data can assist the quantitative side of the study during design by aiding with conceptual expansion and instrumentation (Amaratunga *at el.* 2002).

Based on the above discussions and the group of the implications of these two main philosophies summarised in table 5.1, and also the nature of this research, the Positivism has been chosen as the research philosophy.

4.6 Research approach

A research approach may also be influenced by the types of data or evidence needed to answer the research questions posed. Based on data characteristics, the research approach can be categorised as qualitative, quantitative, or mixed.

These two approaches are sometimes referred to as inductive and deductive. It is common to match these approaches to two research styles: quantitative and qualitative research (Cohen, *et al.* 1994).

4.6.1 Quantitative research

Quantitative research uses objective measurements and statistical analysis of data that is collected from well-controlled setting. It involves attaching numbers to relationships between variables (Hopkins, 2000). Quantitative research has two types: no experimental and experimental (Ary *et al.* 2002).

In a non-experimental study, no attempt is made to change behaviour or conditions; researchers measure things as they are (Hopkins 2000). Major forms of non-experimental research are survey research (exploratory studies), correlation studies and causal-comparative (or ex post facto) studies.

Survey research is used to measure the characteristics of different groups or to measure their attitudes and opinions toward some issue; correlational research is done

to determine relationships among two or more variables from the same group of people and to examine the strength and direction of relationships among variables (Ary, et al., 2002); causal-comparative research investigates "the cause for or the consequences of differences between groups of people" (Fraenkel *et la.* 1996).
Furthermore, Ragin (1994), observes that quantitative methods concentrate directly on relationships among variables, especially the effects of cause on outcome; and Leedy (1993) confirms that when the data is numerical, the methodology is quantitative. On the other hand, Lee (1992) points out that the quantitative methodology is seen as increasingly inadequate, especially in cross-cultural research.

4.6.2 Qualitative Research

Qualitative research involves the study of cases and makes very little use of numerical data or statistics, relying very heavily instead on verbal data based on subjective meaning given by participants. This research is rooted in phenomenology. It involves intensive narrative data collection in order to understand the way things are and to gain insights into how things got to be that way and how people feel about the way things are (Gay *et al.* 2003).

Qualitative data is collected in natural settings and "*focuses on understanding social phenomena from the perspective of the human participants in the study*" (Ary *et al.* 2002).
Moreover, Ghauri *et al.* (1995) stated that "*Qualitative methods are therefore more suitable when the objectives of the study demands in-depth insight into a phenomenon".*
Usually, qualitative research is for generating theory while quantitative research focuses on testing theory (Ary *et al.* 2002).

Examples of qualitative research include ethnographies (documenting the everyday experiences of people through observation and interviews), historical research (collection and evaluation of data to understand events of the past), and action research (conducted by one or more individuals or groups for the purpose of solving a problem or obtaining information in order to inform local practice) (Fraenkel *et al.*

1996). Table (4.2) summarises the major characteristics of qualitative and quantitative research.

Table 4.2 features of the two research approaches

This table has been removed

Source: Hussey, et al., 1997

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4.6.3 Triangulation methodology:

With the development and perceived legitimacy of both qualitative and quantitative research in social and human sciences, mixed-method research is expanding.

Quantitative and qualitative approaches should be *"thought of as complementary methods that, when taken together, provide broader options for investigating a range of important topics"* (Gay *et al.* 2003).

Thus, the use of diverse research approaches, methods and techniques in one study is known as (triangulation) and such triangulation can overcome the potential bias and sterility of single method approaches Hussey and Hussey (1997).

In recent years, this type of research approach, mixed methods research, has become very popular. Creswell (2003) state that the mixed methods research "*employs data collection associated with forms of data for both quantitative and qualitative research*"

In addition, Denzin (1970) defines triangulation methodology as: "the *combination of methodologies in the study of the same phenomenon*". He adds, multiple and

independent methods, especially if undertaken by different workers investigating the same problem, should, if reaching the same conclusion, have greater validity and reliability than a single methodological approach to a problem.

Sekaran (2000) emphasises the need for multi-method of data collection as almost all data collection method have biases associated with them, therefore, collecting data through multi-method and from multiple sources lends rigor to research. Thus, the rationale behind this combination is that each philosophy has strengths and weaknesses and using a combination would maximise their strengths and minimise their weaknesses.

Denzin (2003) identifies four types of triangulation:

1- Data Triangulation: the use of different sources for data collection (e.g. interviews, observations, questionnaires and documents).
2- Methodological Triangulation: the use of both qualitative and quantitative approaches.
3- Researcher Triangulation: the employment of more than one researcher to study the same problem or phenomena.
4- Theory Triangulation: the use of more than one theory or perspective in research.

For all above discussed, triangulation seems to be appropriate and suitable research methodology for this study. Two types of triangulation method were applied including: data and methodological. Data triangulation was used through the use of a literature review, soliciting expert opinion, semi-structured interviews and questionnaires. Methodological triangulation was also employed through the use of both qualitative data (semi-structured interviews and documents) and quantitative (semi-structured interviews and questionnaires).

4.7 Research Strategy

Saunders *et al.* (2007) defines the research strategy as "*general plan of how the researcher will go about answering the research question(s)*"

There are a number of research strategies identified as being useful in social science research (Yin 2009, Velde *et al.* 2004) , which include: the experiment, survey, the analysis of archival information, a history and the case study.

Yin (2009) notes that every type has advantage and disadvantage based upon the type of research questions which being posed. Table 5.3 highlights the relevant situations for different research strategy.

Table 4.3 Relevant Situations for Different Strategies

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Source: Yin 2009

The case study has been a common research method in psychology, sociology, political science, anthropology, social work, business, education and in economics. Therefore, researchers continue to use the case study research method with success in carefully planned and crafted studies of real-life situation, issues, and problems.

Yin (2003), defines case study as: *"an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident".* He indicates that the case study is an appropriate strategy when 'how' or 'why' questions are being posed, since it allows the researcher to determine not only what happened but also why it happened. He also recommends case study strategy when the researcher has little control over the events and when the focus is on contemporary phenomena.

Denscomble (2003) point out that one of the strengths of the case study strategy is that it allows the researcher to use a variety of sources and a variety of types of data as part of the investigation.

Van der Velde *et al* (2004) mentioned that the most important characteristic of a case study is that a researcher can systematically describe a single case; this case could be a company, a department or even a single individual.

In addition, case study strategy is useful in the early development of a particular research area, and the study of TQM implementation in developing countries is one such example (Mellahi, *et al.* 2001).

Bardoel *et al.* (1999) stated that the use of case study strategy research to explore TQM issues has been gaining more attention. They pointed out that the case study strategy had particular applicability to the evaluation of TQM projects. Therefore, the case study is very useful when studying implementation process, managerial process and organisational changes.

Based on the above discussion, this study has its focus on contemporary events, as it intends to answer the research questions about the TQM of LHEIs, and the researcher has no control over this phenomenon. Thus, the case study strategy has been selected to gain the depth of understanding of the information necessary to identify and investigate the TQM as a mechanism to enhance quality of LHEIs. It was considered to be the most suitable research strategy achieving the research objectives. it was also chosen in accordance with recommendation made by Yin (2009), who recommends the use of case studies when you want to know ‘how’ or ‘why’ a certain implementation or phenomenon has worked or not, with a focus on managerial process.

4.7.1 Number of Case Studies

A primary distinction when adopting case study design is between single case and multiple cases designs (Yin 2003). Both designs can further on be classified as holistic or embedded design, depending on the defined unit of analysis (Yin 2003). He

affirms that the case study approach can be used when the case is a *representative* or *typical* case.

Walliman (2006) state" *the most common reason for selecting more than one case study is so several cases can be compared. You will need to know what the characteristics are of the population of possible case studies and devise a sampling frame. Depending on your research objectives you may wish to compare extreme examples, or similar samples. The selection of case studies will then be based on this decision, using either probability sampling methods or non-probability methods*".

Voss *et al.* (2007) believed that although a single case study offers greater depth of understanding, it has limitations in respect of the generalisability of the conclusions drawn from it.

Furthermore, a single case study may also lead to biases such as misjudging the representativeness of a single event, and exaggerating easily available data. One way of guarding against observer bias and augmenting external validity is to use multiple cases (Voss *et al.* 2002, Yin 2003). Indeed, Yin (2003) argues that multiple case studies may well be preferable to a single case study and that, where the researcher chooses to use a single case study only, s/he must have a very strong justification for this choice.

In a multiple- case study, one goal is to build a general explanation that fits each of the individual case in the study, even though the cases will vary according to different characteristics. With a multiple case studies, there is better potential for greater explanatory power and better possibilities for generalisation than a single - case study.

In addition, Fraenkel *et al.* (2006) points out that multiple- case design have both advantage and disadvantage when compared to single-case design. They added that the results of multiple-case studies are often considered more compelling, and they are more likely to lend themselves to valid generalisation.

Moreover, Yin (2003) has reported many advantage of using multiple case studies including:

1- Analytic conclusion independently arising from two cases will be more powerful than those coming from a single casa alone.
2- The contexts of the two cases are likely to differ to some extent.
3- Produce an even stronger effect.

Based on the discussion provided above, and for the reasons that will be given later in this section, two case studies were selected to enable the researcher to enhance the external validity and offer more robust evidence. The researcher also believed that a focus on two case studies would permit a more in-depth study than would be possible with additional cases.

Additionally, the researcher also believed that two case studies are sufficient to satisfy the aim and objectives of this research. The existing of two educational sectors in Libya (private and public) makes selecting of two case studies, one represented the private and other the public , is very necessary. These two case studies are:
Al-Fateh University (FU) and the Academy for Graduate studies (AGS).
Figure (4.2) illustrates the two case studies adopted by the research, where the context is the Libyan HE.

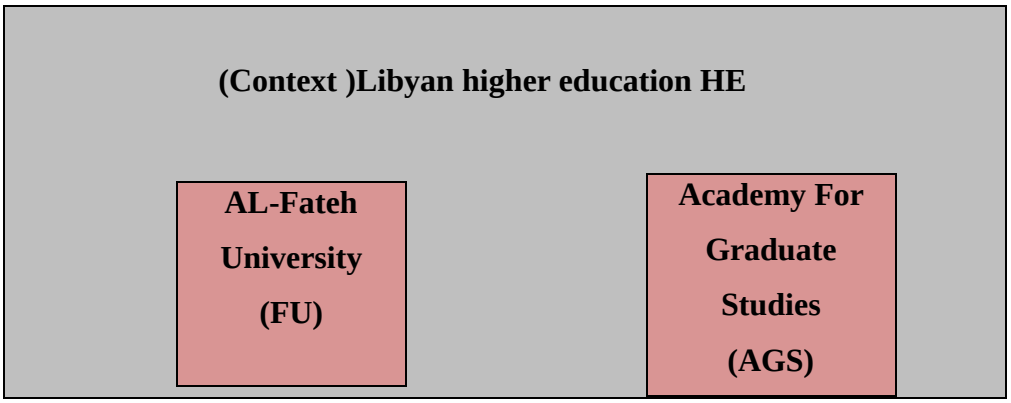

Figure 4.2 the two case studies design (source; adopted Yin (2003)

5.7.2 Justification of Selecting the Two Case Studies

In addition to the above evidence that the two case studies strategy is appropriate for this study, there is another important reason for this selection**,** it is due the fact that higher education in Libya is composed of two sectors including:

1- **Public Sector**: it consists of all public universities and colleges, and Theses universities Carrey out their works under the supervision of the Government. Each public university is headed by the Chancellor "Secretary of the Peoples' Committee" and is governed by the "Peoples' Committee" in which each faculty is represented by its Secretary (the dean). Thus, all the public universities operate under the same environment and facing the same circumstance.
2- **Private Sector:** it consists of all the private universities and colleges. There are differences between these private universities and the public ones in terms of (funding, organisational structure, the government's responsibility…etc). These universities have a large amount of autonomy. They are self-financed, which their main financial resources are from students' fees and a service provided to the public.

Thus, the (FU) and (AGS) represented the public and private universities respectively. These two case studies were chosen for the following reasons:

- **(FU)** is firmly established and deep-rooted public university in Libya. It contributes in establishing many universities in Libya by providing consultants and educators who are experts in curriculum, academic administration, and teaching (GSUM 2005). It is one of the oldest Libyan University (built in 1960), and many students have graduated from this institution. Moreover, (FU) University is one of the largest universities of Libya in terms of (number of students, specialties taught, and faculty members). In addition, the location of the university in the capital (Tripoli) makes it one of the most important universities and offers variety of services to different institutions both public and private. , and it is considering as an expertise bank (GSUSM 2005). Moreover, the rest of the other universities in Libya have the same structure and administrational system. Therefore, (FU) is typical as it is representative of other public universities in Libya.
- **(AGS)** is the only educational institutions in Libya are exclusively dedicated to Master and Doctoral studies; it is autonomous and depends entirely on its own financial resources. It is the biggest private university in Libya (students

and constructions), and the only one that have been obtained financial support from the Government. In addition to the main headquarter in Tripoli; it has two branches in Benghazi and Misrata.

Based in the Above, **FU** and **AGS** are typical as there are representative of other universities in Libya even though others are smaller but they follow the same practices. Moreover, the two case studies could present the other Libyan universities while they are carrying the same structure, hierarchy, and administrational system.

The lessons and knowledge that could be obtained from studying and investigating the issues enabling and effecting quality services provided by the both would be vital and remarkable.

Logistically the researcher has a good relationship through his study and working in these two institutions, making access to them is undemanding. Also a large rate of questionnaire response will be guaranteed. In addition, they are near to where the researcher lives, subsequently from time, efforts and cost constrains point of view is convenient. Table (4.4) shows some differences between the two case studies others.

Table 4.4 the key difference between the two case studies

Al-Fateh University	**Academy of Graduate Studies**
Offered undergraduates and post graduates certificates.	Offered only postgraduate certificates.
One of the oldest university (established in 1960)	New institutions (established in 1996)
Funded by the government	Autonomous
It is free for all students	It is not free (Paying)
Headed by the (the "Secretary of the Peoples' Committee") and governed by the "Peoples' Committee"	Headed by the Academy chancellor.

Source: Author

4.8 Time Horizon

It refers to the period of data collection; time horizon studies are usually categorized under two types: cross-sectional and longitudinal studies Sekaran (2003). A cross-sectional study is one of a particular phenomenon (or phenomena) at a particular time; data are collected just once, so it is called "one-shot".

While a longitudinal study involves a survey, is a fixed sample, which is measured repeatedly. The choice of which one of these types to be undertaken is influenced by three factors; purpose of research, research strategy (Churchill 2001) and time available for the researcher (Saunders *et al.* 2003). Taking these criteria into account,

The most popular type in real social research is the cross-sectional study (Zikumund, 2003, Kerlingers 1992).

Thus, a cross -sectional research was chosen for this research, for the following reasons:

- It is a common method of descriptive research in business studies (Churchill, 2001)
- It is the most common method of survey research (Churchill 2001), because a survey strategy requires collecting data from a sizable population in a particular time (Leedy, *et al.* 2001)
- It is appropriate for most research projects undertaken for academic courses because research projects are time constrained (Saunders *et al.* 2007). Using this method, a study is carried out just once, over a short period of time, to collect information from a large number of people or companies (Hussey *et al.* 1997).
- Data need to be gathered from a large sample or an entire population in some cases. Hence, it increases the generalisability of results (Scandura, *et al.* 2000).

4.9 Data Collection

Data collection is one of the main parts of the research process.

4.9.1 Choice of Method

The main consideration for the choice of method is the balance among the cost, speed, and the coverage of content for the constructs under study. While the main cost

involved in the research design of survey appears to be that of logistics in reaching out and communicating with the intended respondents, the cost of administering the survey needs to be reasonable to the extent that it is affordable for the researcher.

Easterby-Smith *et al.* (2002), Hussey *et al.* (1997) point out that there are several ways to elicit (extract) information stored in the minds of people, such as questionnaires, interviews, observations or archival materials. On the other hand, data collection methods depending on the adoption of research philosophy, research approach, research strategy, and the aim and objectives of the research in general, the most common methods used to collect data are questionnaires and interviews(Yin, 2003). He reports: *"case studies need to be limited to a signal source of evidence. In fact, most of the better case studies rely on a variety of sources".*

Susan (1997) state that the key strength of the case study method is involves using multiple source and techniques in the data gathering process. The quantitative method may also be used where the survey is a method to collect the data.
Mertens (1998) reported that the surveys are good because they allow collections of data from a larger number of people than is generally possible when using a quasi-experimental or experimental design.

In survey research, the researcher has choice of mail, telephone, personal interviews, e-mail, or combination of these as a method of collecting data.
As this research aims to discover main characteristics of LHEIs and TQM practices, a wide range of issues need to be studied. The method for data collection, hence, is required to facilitate economically and conveniently the coverage of questions befitting the range of issues of interests. Under this consideration and those discussed, the triangulation (questionnaire & interview) method had been chosen as the method for data collection.

4.9.2 Questionnaire

Questionnaire can be defined as "*a reformulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives*"

(Sekaran 2003).

Ghauri *et al.* (1995) stressed that questionnaires are the most popular data collection method in business studies.

Furthermore, Bryman *et al.* (2007) stated that the questionnaire method will probably be the most appropriate form of gathering information from both staff and managers.

It is anonymous and therefore can encourage greater honesty of response. Moreover, questionnaires can be more economical in terms of time and money and can be given to many people simultaneously. This is in addition to the greater uniformity a questionnaire can provide in gathering information.

Every person responds to exactly the same question. In general, the data the questionnaire provides can be easily analysed and interpreted.

Although the questionnaire has several advantages, it also has some limitations. Henerson *et al.* (1987) state that the questionnaire is not flexible; it cannot explore further any ideas or comments that a respondent makes.

Henerson *et al*. (1987) also argue that written responses may be limiting for some people who might express themselves more easily orally.

There are many types of questionnaires based on how it is administrated, Saunders *et al.* (2007) classified a questionnaire as: *"either self-administered or interviewer-administered"*.

Self-administered questionnaires are usually completed by the respondents. Such questionnaires are delivered and returned electronically (on-line questionnaires), posted to respondents who return them by post after completion (postal or mail questionnaires), or delivered by hand to each respondent and collected later (delivery and collection questionnaires).

Responses to interviewer-administered questionnaires, which include telephone questionnaires and structured interviews, are recorded by the interviewer on the basis of each respondent's answer. One drawback of interviewer-administered questionnaires is the difficulty in finding a suitable time for respondents.

Walliman (2006) addresses the advantage and disadvantage of self-completion questionnaires as shown in table (5.5)

Table 4.5 advantage and disadvantage of the self-completion questionnaire.

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Source: Walliman 2006

For this research the delivery and collection questionnaire is chosen as the main data collection method. The rationale behind this choice is:

- The use of on-line questionnaires requires respondents to have web sites or known e-mails, a condition that cannot be guaranteed in the case of Libyan Universities. As a result, this type cannot be used.
- The use of postal (mail) questionnaires has little control in securing a response from specific respondents and cannot control the speed of responses (Churchill

2001), while delivery and collection questionnaires ensure a high response rate and accurate sampling (Oppenheim 2000).

- ❖ All the completed responses can be collected within a short period of time and a good rapport can be established to motivate respondents; there is an opportunity to introduce the research topic and motivate the respondents to give their answers honestly; any doubt or misunderstanding about the questionnaire will be clarified; it is less expensive when distributed to group of respondents; it gains an almost 100% response rate.

4.9.2.1 Piloting the questionnaire

Pilot testing is a good means of obtaining feedback on the content, clarity and style of the survey.

Saunders *et al.* (2007) stated that: "*The purpose of the pilot test is to refine the questionnaire so that respondents will have no problems in answering the questions and there will be no problems in recording the data. In addition, it will enable you to obtain some assessment of the questions' validity and likely reliability of the data that will be collected".*

The main purposes of the pilot study were to:

- ➢ Determine whether the questionnaire instructions were easily understood.
- ➢ Identify questions that could be misunderstood or were poorly worded.
- ➢ Determine whether rating scales were understood.
- ➢ Determine how long it would take participants to complete the survey.
- ➢ Determine the participants' reactions to the survey in general.
- ➢ Make an initial reliability assessment of the measurement scales.

In this research the pilot study was conducted in three stages.

- ▪ **First stage**

The questionnaire was repeatedly discussed with the author' supervisor to ascertain that the variable were covered and appropriately measured, and all the statements were clear and consistent with the research context.

- ▪ **Second stage**

The first draft of the questionnaire was considered by six particular colleagues who are doing PhD research in TQM and management in Coventry University and other

UK universities. The questionnaire has considered by professionals in the field of quality in Libya (National Centre for quality and Standards) for their comments on the structure of the questionnaire, and to test the validity of the content.

Each participant of the group was given a brief introduction about the aim of the research. They provided the researcher with suggestions about question wording, design, layout and question content. Their suggestions and comments were taken into account.

- **Third stage**

To make sure that the statistical measurement would be suitable and service the objectives of the study, the statistics support department at Coventry University has advised some points which been considered.

- **Fourth stage**

At the fourth stage of the questionnaire was sent to a small sample of individuals (8 faculty staff, and 10 sample of students), who were very similar to the target population (Fink *et al.* 1995, Nunnally *et al.* 1994). Each participant in this pilot test completed the questionnaire and provided feedback to the researcher regarding the clarity of the questionnaire.

4.9.2.2 Questionnaire Design

The aim of the questionnaire design is to translate the research objectives into specific questions. The answers of these questions should provide data for answering all or more of the research questions, planning and designing the questionnaire.

What makes a good and reliable questionnaire?

Good questionnaire construction is critical to the success of the survey; a poorly designed questionnaire can be the main sources of non-sampling error which can affect the response rate achieved in the survey.

The main characteristics of the reliable questionnaire are (Williams, 2003):

- ✓ Questions need to be clear, specific, and quick to fill it.
- ✓ A good question leaves no ambiguity in the mind of the respondent.
- ✓ Questions must be not threading.
- ✓ The questions must respect the dignity and privacy of the respondents.
- ✓ Good questions provide reliable and valid information.

In addition, (Sekaran 2003) suggested that the words of each statement should not exceed one full line in print, or between 20 and 24 words, as recommended by Andrews (1984) and Oppenheim (1986) who found that short statements or questions are essential to obtain valid answers and to achieve a high response rate. The questionnaire used affirmative questions and avoided the use of double negative questions.

Regarding the types of questions, There are two types of questions: open-ended and closed. In this research closed questions were used. The closed questions ask respondents to make a choice from a set of alternatives given by researchers (Sekaran 2003). The closed-question style has several advantages including;

- ✓ It helps respondents to make fast decisions to select among alternatives and it does not require the respondents to write anything.
- ✓ It saves time as data can be coded easily and its analysis is straightforward (Sekaran 2003).
- ✓ Closed questions are very suitable for gathering factual data and are usually easy to analyse, since the range of potential responses is restricted (Hussy *et al.* 1997)

In this study, the survey questionnaire was designed to gain information about the TQM in higher education in Libya, assessment of quality culture and services which been provided to the students at the case studies were the core of this questionnaire. The questions on organisational quality culture were asked based on eight critical elements (CSFs) which were determined by the researcher after a comprehensive review of the literature.

The previous studies used reliable and valid questions to evaluate quality management in either manufacturing or service organizations. Some modification was necessary because direct use of previous instruments was not always possible. A few new items were constructed based on the literature, which is an approach commonly used by researchers when previous instruments are not available (Grover 1993).

Thus, in this research, the questions in the questionnaire revolve around the two main variables, namely: organisational quality culture and service' quality.

4.9.2.3 Questionnaire rating scale

The measurement scale of the questionnaire is one of most important parts of the questionnaire development process, since it has a significant impact on capturing the variables of the phenomena, reliability and validity, response rate, and lower item omissions per respondent (Dawes 2007).

A five point Likert ordinal scale was employed throughout the questionnaire in order to indicate the degree of agreement or disagreement with each statement included in the questionnaire. This scale is widely used and provides a range of responses to a given question or statement (Cohen *et al.* 2007).

In social science studies, Likert-type scales are commonly used to measure a broad variety of constructs (Kent 2001).

Referring to related studies of TQM it can be observed that the majority of studies discussed in the literature review have used Likert-type scales to measure the quality practices in organisation and to evaluate the quality services.

The type of Likert scale which was used in this research is 1) strongly agree, 2) agree, 3) not sure, 4) disagree, 5) strongly disagree.

The rationale behind the choice of the five-point Likert Scale within this study is:

- It helps respondents to make good judgments and provides them with some degree of flexibility of choice to reflect the intensity of respondents' views
- It does not confuse the respondents with having many choices on its continuum scale; Hussey *et al.* (1997) indicated that it makes the respondents comfortable with a wide range of choices on its continuum scale and that it is easy for respondents to complete
- It allows the researcher to have several statistical techniques and to conduct a powerful statistical analysis; the five-point Likert scale helps the researcher in coding and analysing the data (Hussey *et al.* 1997).
- Many research studies in the field of TQM used five-point Likert scale (such Chapman *et al.* 2002, Temtime *et al.* 2002, Solis *et al.* 1998).

4.9.2.4 Questionnaire Layout

Saunders *et al.* (2003) point out that the layout is a very important issue for questionnaire design. It must be designed in such a way that makes it easy to read and complete.

In order to encourage the respondents to fill in and return the questionnaire, the layout must be attractive and not too long. The length of the self-administered questionnaire of between four and eight A4 pages is acceptable (Saunders *et al.* 2007). Moreover the introduction must be clear and explain the research objectives and provide a way for answering each part without difficulties.

Following the guidelines by Oppenheim (2000) and Sekaran (2003), the following issues were given specialist attention in the questionnaire layout:

1. The sequence of questions was arranged from general to more specific questions which make the questionnaire as easy as possible for the respondents;
2. A special attention was given to emphasise the confidentiality; all respondents will be treated with the utmost confidence and results will be used for research purposes only;
3. The respondents were provided a covering letter. (Oppenheim 1992, Saunders *et al.* 2003) pointed out that the covering letter is used to:
    a. Access the companies
    b. Encourage respondents to participate in the research
    c. Explain the purpose of the research
    d. Ensure that the data provided by respondents will be treated in high confidentiality.

4.9.2.5 Translation of the research questionnaire

Although English is widely understood in Libyan Universities, the decision was made to translate the research questionnaire into Arabic, the official language in Libya, in order to make it very clear for the respondents. Originally the questionnaire was designed in English in the UK and translated into Arabic in Libya. It was decided to distribute the questionnaire in both English and Arabic; the reasons being that some respondents prefer to answer the English copy.

Based on Saunders *et al.* (2007), there are four techniques that can be used in the process of the questionnaire translation: direct translation; back translation; parallel translation and mixed techniques.

The technique which was adopted for the translation of this research questionnaire was the parallel method.

The process of this technique is that the source questionnaire is translated by two or more independent translators. Two translated questionnaires are compared and then the final version is created (see appendix A).

4.9.2.6 The contents of the questionnaire

In this research there are two main questionnaires, the first one has targeted the top management in both case studies as well as the higher educational management in Libya (national committee for universities).

The second one has targeted the students in the case studies in order to assess the services that been delivered to them.

The final version of the first questionnaire includes two main parts. Part one aims to obtain a general background of the respondents such as: age, gender, educational background, work experience. Part two includes eight statements to assess the quality culture at the case studies by using the (CSFs):

- Leadership includes 5 statements;
- Training and education includes 6 statements;
- continuous improvement includes 6 statements;
- Students and stakeholders includes 5 statements ;
- Employee's involvement includes 6 statements;
- Structure and systems includes 7 statements ;
- Financial condition includes 8 statements and
- Academic condition includes 8 statements.

Consequently, the questionnaire items are organised into the eight TQM elements totaling **51** questions.

The eight elements were derived from the TQM philosophy and principles reviewed in Chapter 2 and 3. Moreover, the review of relevant literature on implementing TQM in higher education worldwide has helped the researcher to understand the concepts of implementing TQM and to generate a questionnaire questions appropriate to fulfilling the research objectives.

The final version of the second questionnaire includes two main parts, Part one aims to obtain general background of the respondents (students) such as: Age, Gender and

year of study. Part two aims to assess the quality of the services that is provided to the students utilizing the SERVQUAL instrument includes five elements (dimensions):

- Tangibility includes **4** statements.
- Reliability includes **3** statements.
- Responsibility includes 4 statements.
- Security includes **4** statements.
- Empathy includes **4** statements.

It can be noticed that the total statements of SERVQUAL instrument is **19** covering the five dimensions of service quality.

4.9.3 Research population

A population is defined as the whole set of objects or things of interest that need to be investigated (Upon *et al.* 2006).

In order to achieve the second objective: (*To investigate the extent to which the (LHEIs) adopt the principles of TQM*),this research considered all the elements of the population by including all the top management in the both case studies as well as top management of higher education sector in Libya. They are the most familiar people in Libyan higher education sector with quality, hence, they are able to assess the quality issues.

For example, the Malcolm Baldrige National Award (2011) refers to Senior Leaders as those with the main responsibility for managing the overall organisation. Senior Leaders include administrators, Departments Heads and/or Faculty leaders. In this research, for the (FU), the top management are comprised of the (General Peoples' Committee for Education & Scientific Research) National Committees of Universities, committee of (FU) university, heads of the departments.

The top management of the (AGS) consists of the committee of the Academy of Graduate Studies and the committee of the schools in the academy.

The committee members of the both case study were welcomed to participate in this research, and have shown great willingness to answer the questions of the questionnaire.

Moreover, the secretary of People's Committee of the (FU) University (Chancellor) has made request to all the members to cooperate with the researcher.

The president of the second case study (AGS) has convened meeting with schools' Deans asking them to facilitate the researcher's work, (the researcher attended this meeting). Table 4.6 and 4.7 shows the targeted populating of the top management of the both case studies respectively.

Table 4.6 the targeted population of the first case study (FU)

Position's name	**Numbers**
General Peoples' Committee for Education & Scientific Research	13
National Committees of Universities	11
Committee of El-Fath university	15
Committee of the Faculty Medicine	9
Committee of the faculty Arts& Media	6
Committee of Dentistry	7
Committee of Economic and Political Sciences	7
Committee of General Education	9
Committee of Education (Bengasher	8
Committee of Education (Tripoli)	8
Committee of Education (Janzour)	8
Committee of Engineering	7
Committee of Information Technology	6
Committee of Languages	8
Committee of Faculty of Law.	8
Committee of Medical Technology	7
Committee of Pharmacy	8
Committee of Science	9
Committee of Veterinary Medicine	9
Total sample	**163**

Source: Author

Table (4.7) the targeted population of the second case study (AGS)

Position's name	Numbers
Committee of AGS	13
Committee of Languages school including : (English, Arabic, French, Italian and African)	13
Committee of administrative science school	13
Committee of Engineering science	15
Committee of Basic science	13
Committee of Arts & Media science	9
Committee of Strategic science	13
Committee of Human science	11
Committee of human resource institute	10
Total sample	**110**

Source: Author

As it can be noticed from above that the sample of the first case study consists of all the committee of university, faculties and departments which was 163.

On the other hand, the sample of the second case study consists of the committee of (AGS) and the committee of schools which was 110.

In order to accomplish the third objective: (*To evaluate and measure the customer perception of quality service*). The postgraduate students in the two case studies have been targeted for these reasons:

- There are no undergraduate students at the (AGS).
- Comparison between the students in the same level (postgraduate) at the both case studies allows validating the results.
- The students at this level have the experience to judge the services they received.

Therefore, **425** questioners were distributed to the postgraduate students of all the departments of the first case study (FU). This sample was designed to include as many students as possible randomly.

400 questionnaires were distributed randomly to the students at the second case study (AGS).

4.9.4 Response rate

As mentioned earlier, this study including two types of questionnaire; the first one targeted the top management at the both case studies and the second one targeted the students at the case studies.

A total of 163 questionnaires were distributed personally by hand to the top management at the first case study (FU), of which 149 were returned and completed and usable. The response rate was 91.41% which is considered a high rate.

In the second case study (AGS), 110 questionnaires were distributed personally by hand to the top management, of which 97 were returned and completed and usable.

The response rate was 88.2% which is considered a high rate.

In the second questionnaire which designed to assess the quality services, 425 questionnaires were disrupted personally through the admission department at the (FU), of which 302 were returned and completed and usable. So, the response rate was 71%. On the other hand, 400 questionnaires were disrupted in the (AGS) through the student services department, of which 292 were returned and completed. It means that the response rate was 73%.

This high rate is due to the Oppenheim (1992)'recommendations that been taken in consideration:

- Advance warning : informing the respondents of the study in advance ;
- Explanation of selection : explaining the method of sampling used;
- Confidentiality : assuring respondents that all information will be treated with total confidentiality.

Much effort was made in order to maximise the response rate including: The researcher delivered and collected the questionnaires by himself to save participants' time and cost; Telephone calls, whenever possible, were conducted to remind the respondents to answer the questionnaire and The questionnaire was short and easy to complete.

4.9.5 Reliability and Validity

In addition to the previous development stages of the questionnaire, the questionnaire should meet acceptable levels of both reliability and validity criteria.

4.9.5.1 Reliability

Reliability of a measure indicates the extent to which it is without bias (error free) and, hence, ensures consistent measurement across time and across various items in the instrument (Sekran 2003). In addition Reliability is defined as the extent to which a test produces consistent, accurate results when administered under similar conditions (Hatch *et al.* 1991).

There are several methods to measure an instrument's reliability of which the most general way is the internal consistency method (Saraph *et al*. 1989). Among the many indicators used for internal consistency, the Cronbach's alpha coefficient is the most common indicators (Pallant 2001).

In this study, Cronbach's alpha measurement of internal consistency was undertaken to evaluate the overall reliability of the measurement scale, where alpha gives an estimate of the proportion of the total variance that is not due to error which represents the reliability of the scale (Oppenheim 1992). The recommended minimum acceptable level of reliability "alpha" is 0.60 using Hair *et al.*'s (1998) criterion and greater than .50 using Nunnally's (1978) criterion. Next chapter (6) will present the detailed discussion of the empirical results of reliability analysis tests.

4.9.5.2 Validity

The validity of a scale refers to the degree of match between the scale's conceptual and operational definitions, there must be a "reasonable" correspondence between a concept that a scale attempts to represent and the empirical indicator(s) that is (are) developed to supposedly measure the concept (Tan 2002).

Although there are a number of validity measurements, there is no validity in a test unless its reliability is consistent (Ary *et al.* 2002).

In this study two of the measures are presented here including: content validity and construct validity.

- ✓ **Content validity**

Content validity of a scale refers to the degree the full content of a definition is represented in the scale (Neuman 2003). A scale has content validity if its items represent the intended field of the concept that the scale is supposed to measure (Ahire *et al*. 1996), and that the items in the scale cover all aspects of the concept being measured

Since content validity is not 'evaluated numerically, it is subjectively judged by the researchers. Thus, content validity depends on how well the researchers created the measurement items to cover the content domain of the variable being measured (Nunnally 1967).

Hence, the above indicated measures of the critical factors in quality management were developed based on an exhaustive review of the literature and detailed evaluations by academicians and quality practitioners, they are considered to have content validity

In this study, the instrument here has content validity. This claim of validity is professed on the basis that the selection and subsequent inclusion of the questionnaire items were based on the extensive literature review from published works that were conducted by established researchers in TQM in educational context. In addition, all the suggestions which been made by the academicians and practicing managers were taken into consideration and been represented adequately as mentioned earlier.

- ✓ **Construct validity**

Construct validity hence represents the degree to which the multiple indicators in a scale operate in a consistent manner (Neuman 2003). If the items it contains all measure the theoretical construct with which the scale is designed to measure then a scale is said to have construct validity (Saraph *et al*. 1989).

Basically, construct validity assesses the degree to which the operationalisation of the construct reflects its theoretical meaning (Kim 2006).

There is no best or single way to measure construct validity; it represents a gestalt, or accumulation of knowledge over time and repeated use with different groups and in multiple settings (Litwin *et al*. 2005).

4.9.3 Interviews

An interview is a face-to-face dialogue between two persons-the interviewer and the interviewee-to obtain information in greater detail about a particular topic.

Charmaz (2007) defined an interviews as "*An interview is a directed conversation; an intensive interview permits an in-depth exploration of a particular topic with a person who has had the relevant experiences ".*

According to Sekaran (2003), one method of collecting data is to interview respondents in order to obtain information on the issue of interest.

Saunders *et al.* (2007) suggested three categories of interviews: structured, semi structured and unstructured.

Table (5.8) shows the major differences between the three types of interview. Yet, more than one type of interview can be integrated according to the nature of the research problem and objectives (Cameron *et al.* 2000).

4.9.3.1 Structured interviews

A structured interview is known as standardised interview. It is used in descriptive studies to obtain quantitative data whereby the researcher uses questionnaires based on a predetermined and standardised or identical set of questions. The researcher reads out each question and then records the response on a standardised schedule, usually with pre-coded answers. According to (Sekaran 2000), structured interviews should highlight variables or factors that have appeared during the unstructured interviews and are related to the research problem, or when the researcher knows exactly at the beginning what information is needed.

4.9.3.2 Unstructured interviews

Unstructured interviews (also called in-depth interviews) are used in exploratory studies to explore in depth a general and/or new area in which the researcher is interested.

In this type of the interviews, the interviewer tries to collect general information about the research issues without any structured order of questions. It might be completely informal (Easterby-Smith *et al.* 2000).

4.9.3.3 Semi-structured interviews

Semi- structure interview is a non-standardised, and used in explanatory studies whereby the researcher has a list of themes and questions to be covered, although these interviews may vary from interview to interview.

According to (Sekaran 2003) Semi-structured interview is a mix of both structured and unstructured interviews. It includes set questions, but the sequencing of questions, the wording of questions, and sometimes the neglecting and adding of some questions can be changed according to the interviewer's perception of what seems suitable, who the interviewee is and how the interview is going. In addition, semi-structured interviews are strongly recommended as a means of validating findings from the use of a questionnaire (Wass *et al.* 1994).

In addition many Arab researchers have recommended the use of the face-to-face semi structured interviews technique as a means of data collection, in addition to a survey questionnaire, to conduct their research (Al-Bahussein 2000, Al-Rashed 1996). They concluded that this technique is very successful in Arab institutions where managers prefer to talk rather than to complete a questionnaire.

Based on Saunders *et al.* (2007), semi-structured interviews can be used to explore and explain themes that have emerged from the use of a questionnaire. They added that "*semi structure interviews are used not only to reveal and understand what and the how but, also, to place more emphasis on exploring the why".*

Therefore, for this research semi structured interviews were used as a second data collection method. The researcher conducted interviews with five individual staff members from every case study who had filled in the questionnaire, in order to have valid findings, since the interviewees were required to explain their responses to the questionnaire. As well to obtain additional details regarding the TQM principles.

In addition to that, interviews were conducted with seven students from each case study who filled in the questionnaire and expressed their desire to have interview. Again, the aim was to collect information in depth about the items that have no clear-cut answers. It was also a stage where findings from the questionnaires could be validated which the interview questions were based on data already collected through the questionnaires and for which further investigation was needed.

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Source: Cameron et al., 2009: 371–372

The interviews were conducted with the top management. The purpose is to clarify the TQM practices and assessment of the quality culture in the both case studies. As well as gained in-depth information about the opinion of the students about the services.

The initial draft of the interview questions was created form the literature review, and designed based on the questions of the questionnaire. The questions were reviewed by my supervisor and three academic staff to examine their clarity.

According to (dillman 2000), there are three ways to formulate the questions of the interviews, to elicit: opinion, behaviour or attributes. It this study the questions assess the respondents' opinion (how respondents feel about something or what they think, which based on their position and their experiences).

The interview was divided to two parts: the first one including introductory questions to get general information about the LHE and the conditions of LHEIs regarding the

quality issues. The second part was about the quality culture and to what extent that the case study adopts these elements.

4.10 Data Analysis

As mentioned before, both quantitative and qualitative approaches were utilised within this study. The questionnaire was used as a main data collection method and semi-structured interviews were conducted with the top management and students in order to explain more about the themes that emerged from the questionnaire. The following paragraphs give a brief discussion about the tests and the methods used in analysing the obtained data.

4.10.1 Statistical Method

Selecting the right statistical methods depends on the nature of data and the nature of and the relationship between the method and the research objectives Therefore, this study used what is relevant to the research question and framework.

The descriptive analysis of the data is the first statistical technique used to provide a summary of the respondents' demographic characteristics using means, frequencies and standard deviations of the responses. Descriptive statistics, called exploratory statistics, involve the transformation of raw data into a form that will provide information to describe a set of factors in a situation. This is accomplished through ordering and manipulating the raw data collected (Sekaran 2003).

Pearson's correlation coefficient is the second statistical technique. It indicates the strength and the direction of the relationship between a pair of interval variables (Owdeh *et al.* 1992, Bryman *et al.* 2001, Al-Zoubi *et al.* 2004). Bryman and Cramer (2001) argue that, a Pearson's rank correlation analysis varies between -1 and +1, therefore, if the correlation between two variables was -1 or +1, it would refer to a perfect correlation. The levels of 0.01 and 0.05 were used as the criterion for accepting differences or relationship as statistically significant.

Bryman *et al.* (1998) cited from Cohen *et al.* (1982), recommend the following: 0.19 and below is very low; 0.20 to 0.39 is low; 0.40 to 0.69 is modest 0.70 to 0.89 is high; 0.90 to 1 is very high.

Moreover, an internal consistency measure (Cronbach's Alpha) was used to measure the reliability of the questionnaire items and constructs.

4.10.2 Qualitative Data Analysis (Interviews)

There is several analysis techniques associated with qualitative data (Saunders et al., 1994). In this study (semi-structured interviews) the complete set of transcribed interviews was analysed using analytical procedure (Miles *et al.* 1994). Many authors (Hussy *et al.* 1997; Saunders *et al.* 2003) have recommended this technique due to its flexibility to fit any methodology and its rigorous and systematic analysis procedure. This technique has many advantages including (Lillis 1999):

- It provides several iterations from data transcripts to the results of analysis, through successive stages of data reduction and summarisation.
- All case assessments can be done through the analysis process.
- It also allows for the emergence of new propositions grounded in the empirical data or unexpected relations observed in the data.

According to (Mile *et al.* 1994), the process of the analytical procedure is divided into three steps: data reduction, data display and drawing & verification of conclusion. Initially, all the interview notes were converted and transcribed, and analysied according to the interview questions.

The analysis started with the reading and re-reading of the data allowing the research to understand the content and analyse the answer of the same question from all the interviews independently; the most important issues were underlined, then the main results of each interview were highlighted and summarised by clustering and coding the interview answers into research categories (Miles *et al.* 1994).

The categories in this study are drawn from the concepts used in the questionnaire. Following the identification of the interview categories, the transcripts of all the interviews were brought together, organised and condensed. Finally the responses of the interviews and questionnaire were linked to get more information about every category.

4.11 Ethical Considerations

Ethics can be defined as a set of moral principles, values and norms that govern the researcher throughout his or her research process (Trevino et al., 2007; Churchill, 1995). It is reflected in the ways of formulating the research topic, designing data collection, and storing data in a good and responsible way (Saunders et al., 2007).
The researcher should understand the essentials of ethical research issues and how they might affect the research process (Sekaran 2003, Saunders *et al.* 2007).

The aim of considering research ethics is to protect all stakeholders involved (e.g. the organisation, respondents, researcher, sponsors, etc.) from any undesirable consequences result from participating in the research (Emory and Cooper 1991). According to Fisher (2007), it is very important that people are not treated unfairly, or that any data collected in the research causes a problem to the individuals or firms involved in the research. Remenyi *et al.* (1998) suggest that three principles of ethics should be followed to achieve a high standard of ethics in business and management studies. These principles are:

- Ensure a high degree of respect for the autonomy of the individuals.
- Work toward the benefits of society as a primary motivation.
- Respect justice.

In consistence with previous discussion, and before starting the fieldwork, the ethics form was submitted to the director of studies at Coventry University. The researcher attached documents that explained the purpose of study and a promise of confidentiality with the copies of the questionnaire. In terms of confidentiality, this was met by excluding respondents' names and identification numbers from the questionnaire. Participants were also informed that their participation was totally voluntary and they could withdraw from the participation at any time; this is consistent with Zikmund's (2000) suggestion that the respondents should be informed of their right to participate or to terminate their participation at any time. Respondents were also told that the researcher would be the only one who would have access to the provided responses.

Accordingly, adherence to the ethical consideration guidelines of Coventry University was assured.

4.12 Chapter Summery

This Chapter has provided an overview of the research methodology to meet the research aim and objectives. The decision to adopt a case study strategy has been justified.

A rationale for the two organisations chosen was presented, in which it has been shown that these represent extreme cases within the Libyan HE environment. The way in which the data was collected has been discussed, and the approach of using questionnaire as the main method of data collection while semi-structured interviews aim to explain and support the results that emerge from the questionnaire.

In the following chapter the research findings are presented. The next chapter will disuse the primary findings of the empirical investigation carried out within the two case study organisations in the Libyan Higher Education sector. Also, it will provide descriptive analysis of the variables of the TQM and the validity and reliability tests.

Chapter Five: Data Analysis

5.1 Introductions

This chapter presents the primary findings of the empirical investigation carried out within the two case study organisations in the Libyan Higher Education sector (FU& AGS). This chapter aims to present and analyse the data obtained from both self-administered questionnaires and face to face semi-structured interviews.

5.2 Reliability of the Questionnaire

Neuman (2003) has asserted the importance of the reliability and validity issues in social theory because the constructs that are involved are usually ambiguous, diffuse, and not directly observable. There are two reasons making the measurement analysis of reliability and validity is very necessary. Firstly: the analysis provides assurance of the findings that they are truthful, credible and hence and believable (Neuman, 2003). Secondly, the reliable and valid instrument allows others to replicate the use of the instrument for other comparative studies and with other population (Flynn *et al*, 1994).

Reliability

As mentioned earlier, Cronbach's alpha measurement of internal consistency was utilised to evaluate the overall reliability of the measurement scale, where alpha gives an estimate of the proportion of the total variance that is not due to error which represents the reliability of the scale. The recommended minimum acceptable level of reliability "alpha" is 0.60 using Hair *et al.*,'s (1998) criterion. Table 5.1 provides a summary of the reliability analysis.

Table 5.1 Results of the Reliability Tests

Item	No of Statements	Alpha
Leadership	**5**	**0.875**
Training & Education	**6**	**0.707**
Continues Improvement	**6**	**0.799**
Student & Stockholders	**5**	**0.758**
Employee's Involvement	**6**	**0.828**
Organisational Structure	**7**	**0.825**
Assessment of Financial Condition	**8**	**0.924**
Assessment of Academic Condition	**8**	**0.892**
Total	***51***	***0.957***

Sources: data analysis result

As shown in Table 5.1, the alpha values for the quality culture factors scales range from 0.71 to 0.92, all of which are above 0.70. So, the scales that are adopted in this study are considered reliable with the sample collected.

5.3 Correlation

The correlation analysis was performed to find out whether or not the way the respondents answered the questions for eight elements correlate to each other.

Pearson Product Moment correlation coefficient was used.

A correlation matrix for Pearson's correlation coefficients between each of the elements is created and presented in table 5.2.

Table 5.2 Correlation Analysis

		Leadership	training and education	Continues Improvement	Student and stakeholders	Employee's Involvement	Organisational Structure	Financial Condition	Academic Condition
Leadership	Pearson Correlation	1	.712**	.765**	.600**	.699**	.746**	.547**	.580**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	246	245	246	245	242	246	246	246
training and education	Pearson Correlation	.712**	1	.738**	.561**	.621**	.611**	.393**	.439**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	245	245	245	244	241	245	245	245
Continues Improvement	Pearson Correlation	.765**	.738**	1	.586**	.747**	.708**	.446**	.508**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	246	245	246	245	242	246	246	246
Student and stakeholders	Pearson Correlation	.600**	.561**	.586**	1	.545**	.588**	.455**	.502**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	245	244	245	245	241	245	245	245
Employee's Involvement	Pearson Correlation	.699**	.621**	.747**	.545**	1	.790**	.603**	.508**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	242	241	242	241	242	242	242	242

Organis ational Structure	Pearson Correlation	.746**	.611**	.708**	.588**	.790**	1	.741**	.574**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	246	245	246	245	242	246	246	246
Financial Condition	Pearson Correlation	.547**	.393**	.446**	.455**	.603**	.741**	1	.537**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	246	245	246	245	242	246	246	246
Academic Condition	Pearson Correlation	.580**	.439**	.508**	.502**	.508**	.574**	.537**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	246	245	246	245	242	246	246	246

**. Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 6.2 all eight elements are significantly correlated to each other and they are all positives. In fact, Structure and Systems factor & Employees involvement has the highest correlation coefficient (0.790).

5.3 General Characteristics of the Sample

The primary purpose of this section is to describe the participants in this study who completed the survey with respect to the following demographic variables: (a) Age, (b) Gender, (c) Educational background and (d) Experience.

The descriptive information, which involved simple descriptive statistics, Frequencies, measures of central tendency and measures of dispersion are presented in the following figures and tables.

5.3.1 The First Case Study (AGS):

5.3.1.1 Age

Table 5.3 Frequency Distribution of Age

Age	Frequency	Percent%
22-28	12	12.4
29-35	20	20.6
36-42	27	27.8
More than 42	38	39.2
Total	***97***	***100***

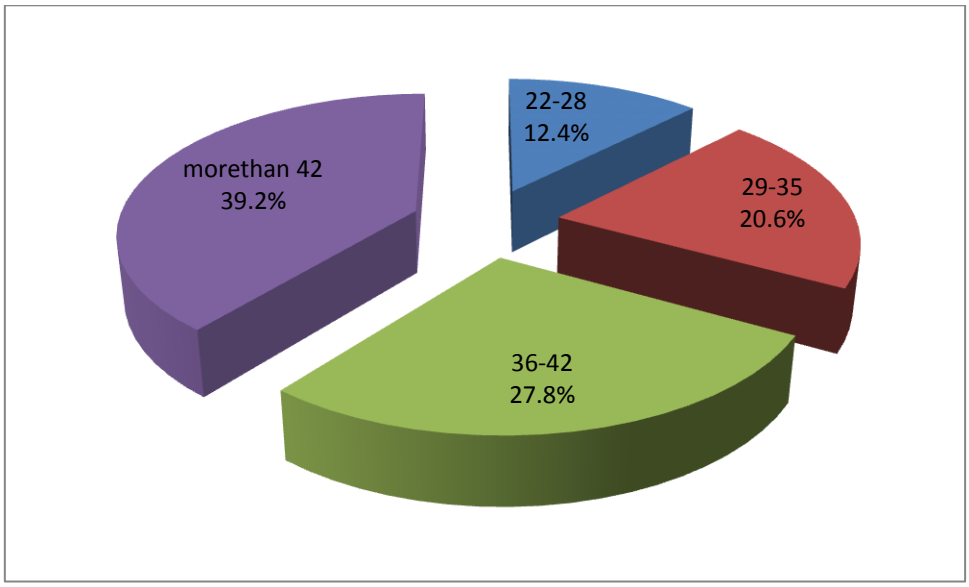

Figure 5.1 Age Distribution of the Respondents at (AGS)

The above figure shows the Age distribution of the the Academy respondents. the majority of the respondents (39.2%) were more than 43years. while, the minority (12.4%) are between 22and 28 years. And 20% of the respondents were aged between 29-35, and 27% between 36-42.

5.3.1.2 Gender

Table 5.4 Frequency Distrbuation of Gender

Gender	Frequency	Percent
Male	87	89.7
Female	10	10.3
Total	***97***	***100***

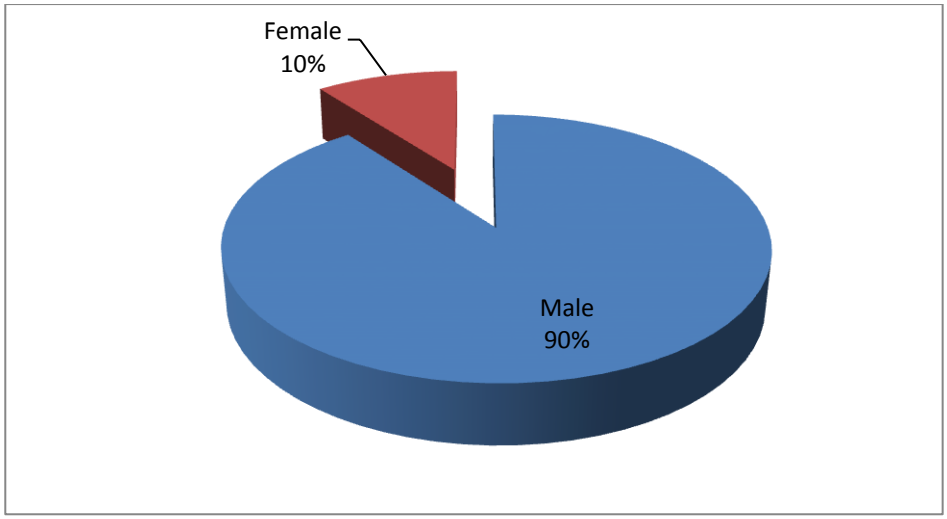

Figure 5.2 the Gender Distribution of the Respondents at (AGS)

The Figure (5.2) shows the Gender distribution of the the (AGS) respondents. The majority (89.7%) is male and (10.3%) is female.

5.3.1.3 Educational Background

Table 5.5 Frequency Distribution of Educational Background

Educational Level	Frequency	Percent
Master	6	6.2
PhD	91	93.8
Total	***97***	***100***

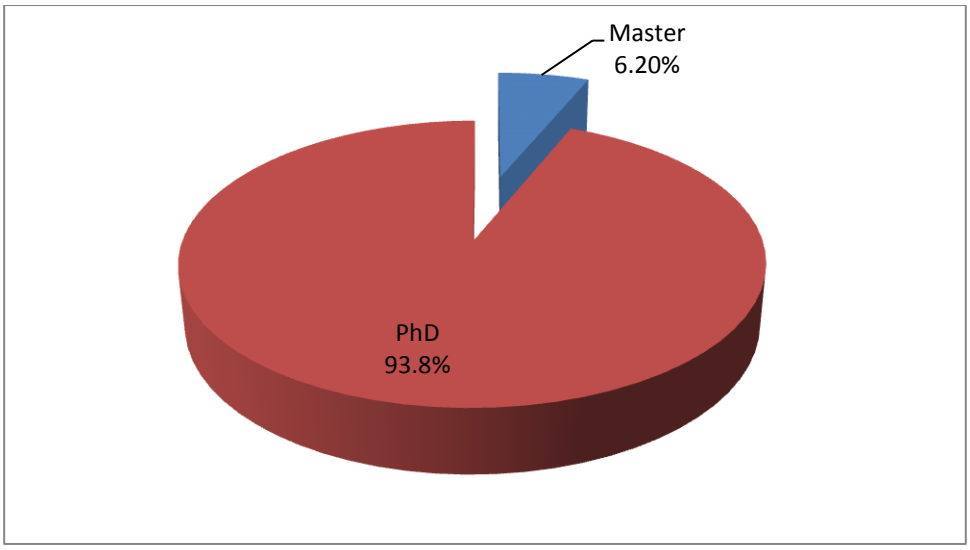

Figure 5.3 Educational Background Distribution of the Respondents at (AGS).

The Figure(5.3) shows the Educational background distribution of the the (AGS) respondents. the majority of the respondents (93.8%) are holding PhD and only (6.2%) have master degree.

5.3.1.4 Experience

Table 5.6 Frequency Distrbuation of Experince

Experience	Frequency	percent
5-9	2	2.1
10-14	11	11.3
15- 19	31	32.0
More than 19	53	54.6
Total	***97***	***100***

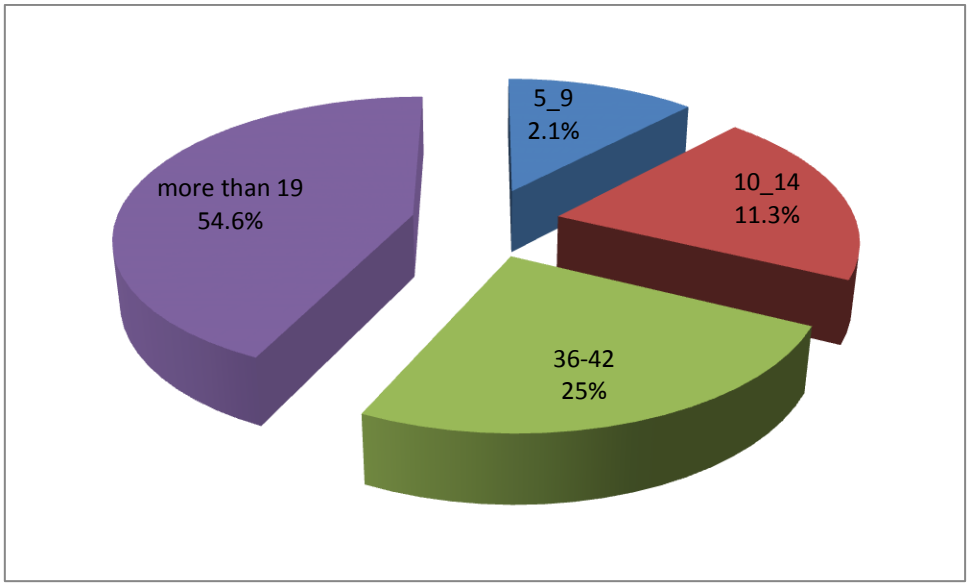

Figure 5.4 Experience Distribution of the Respondents at (AGS)

The Figure (5.4) shows the Experience distribution of the the (AGS) respondents. The majority of the respondents (54.6%) have more than 19 years of experience . and (32.0%) have 15-19 years of experience, (11.3%) have 10-14 years and (2.1%) have experience from 5 to 9 years. less than 5 years' experience.

5.3.2 The Second Case Study (FU)

5.3.2.1 Age

Table 5.7 Frequency Distribution of Age

Age	Frequency	Percent
22-28	18	12.1
29-35	30	20.1
36-42	37	24.8
More than 42	64	43.0
Total	***149***	***100***

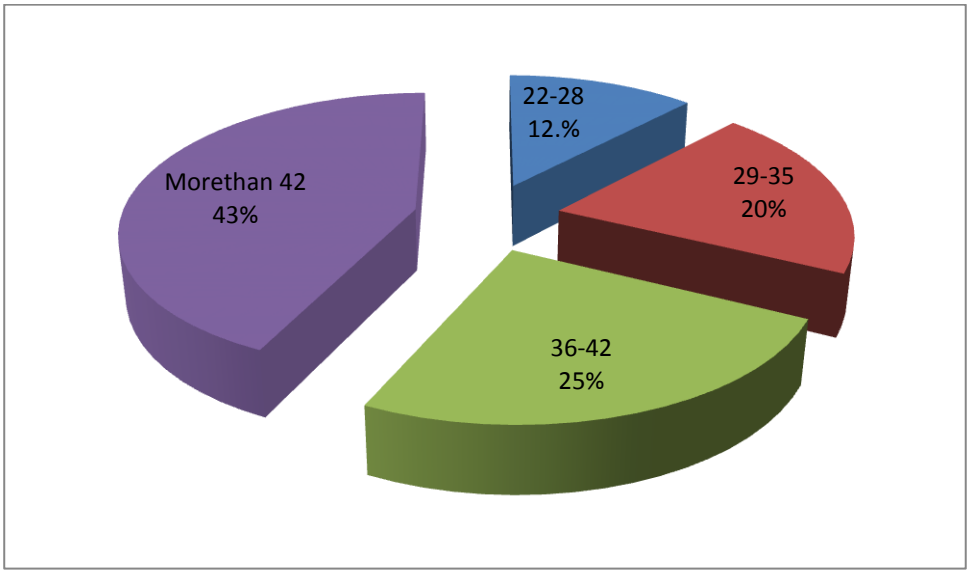

Figure 5.5 Age Distribution of the Respondents at (FU).

The Figure (5.5) shows the Age distribution of the the (FU) respondents. the majority of the respondents (43 %) are more than 43 years.the minority (12.1%) are between 22and 28 years old, (20.1%) are between 29-35years of age and (24.8%) are between 36-42 years of age.

5.3.2.2 Gender

Table 5.8 Frequancy Distrbuation of Gender

Gender	Frequency	Percent
Male	123	82.6
Female	26	17.4
Total	***149***	***100***

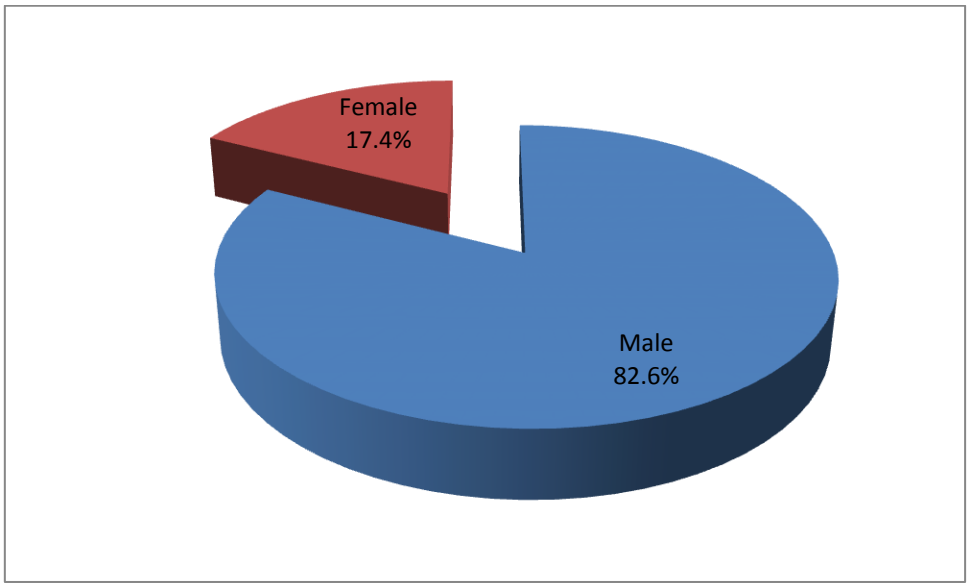

Figure 5.6 Gender Distribution of the Respondents at (FU)

The Figure(5.6) shows the Gender distribution of the the (FU) respondents. the majority of the respondents (82.6%) are male and (17.4%) are female.

5.3.2.3 Educational Background

Table 5.9 Frequancy Distrubuation of Educational Background

Educational Background	**Frequency**	**percent**
High diploma	1	0.67
Bachelor	4	2.68
Master	22	14.77
PhD	122	81.88
Total	***149***	***100***

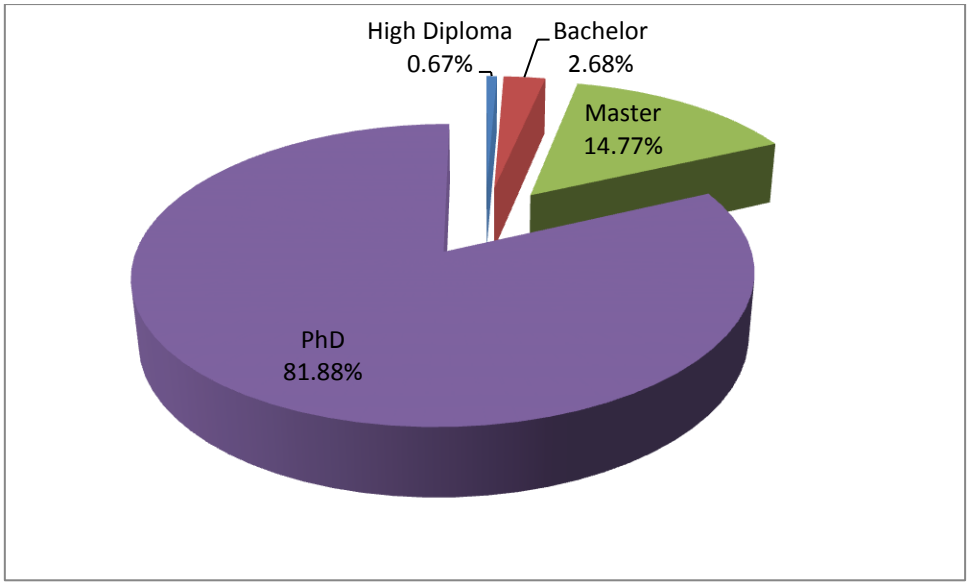

Figure 5.7 Educational Background Distribution of the Respondents at (FU)

The Figure (5.7) shows the Educational background distribution of the the (FU) respondents. the majority of the respondents (81.88%) are holding PhD and (22%) are holding master degree. While as only (2.68%) are holding Bachelor degree and only one of the respondents has High Diploma.

5.3.2.4 Experience

Table 5.10 Frequency Distribution of Experience

Experience	Frequency	percent
5-9	17	11.41
10-14	33	22.14
15- 19	70	46.97
More than 19	29	19.46
Total	***149***	***100***

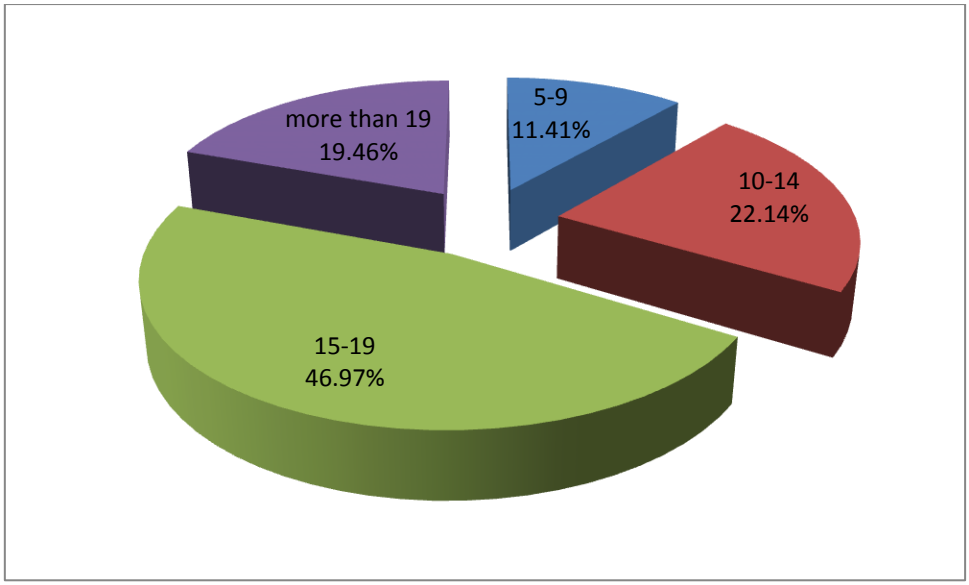

Figure 5.8 Experience Distribution of the Respondents at (FU)

The Figure (6.8) shows the Experience distribution of the the (FU) respondents. the majority of the respondents (46.97%) have 15- 19 years experince, (22.14%) have 10-14 years of experience, and (11.41%) have 5-9 years.

5.4 Quality Culture Assessment

The researcher built his questionnaire on the eight quality culture factors that have been considered as a critical success factors (CSFs) which discussed in chapter three. Based on the analytical framework and the literature review, the quality culture consists of:

Leadership; Training & education; Continues improvement; Student & stakeholders; Employee's involvement; Organisational Structure; Financial and Academic conditions.

In addition, based on the literature these elements are very essential to enhance quality and to create culture that is suitable to implement TQM successfully. Every element is measured against the ideal score (5) as mentioned in chapter (5) methodology.

5.4.1 The First Case Study (AGS)

5.4.1.1 Leadership

The extent of top management commitment was measured through a group of questions. Respondents were asked to state to what extent they agreed or disagreed

with the given statement concerning their top manager' treatment of quality on a five-point likert scale.

Table (5.11) includes five statements that were grouped to examine the attitude of the respondents regarding (Leadership) factor. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.11 Leadership

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
Top management develops a university vision that incorporates quality value, performance expectation and focus on student and other stockholders.	22.7	16.5	60.8	3.47	1.00	1
Top management provides the guidance, means, and encouragement for all workers to follow for success.	42.3	13.4	44.4	2.97	1.08	3
Top management has a process in place to develop their awareness of the concept of Total Quality Management.	62.9	6.2	31.0	3.14	0.92	2
Top management reengineered and developed the organizational structure to suit the TQM concept.	41.3	35.1	23.8	2. 89	1.00	4
Top management provides appropriate awards for person who brings up the ideas and method of improving the quality	71.2	6.2	22.6	2.04	1.20	5
The overall of Leadership				***2.90***	***1.04***	

The Table (5.11) shows the extent and degree of leadership and top management commitment in QM adoption in the (AGS). The statement No 5 " *Top management provides appropriate awards for person who brings up the ideas and method of improving the quality"* had the lowest rank which (71.2%) of the respondents disagreed with the Statement with score mean (2.04) and standard deviation (1.20). On the other hand, the highest rank was in statement 1*" Top management develops a university vision that incorporates quality value, performance expectation and focus*

on student and other stockholders", which (60.8%) of the respondents agree with this statement with score mean (3.47) and (1.00) standard deviation.

The statement No 2 *"Top management provides the guidance, means, and encouragement for all workers to follow for success"* had the second top ranking where (44.4%) of the respondents agreed with this statement with score mean (2.97) and standard deviation (1.08).

5.4.1.2 Training & Education

Table (5.12) includes six statements that were grouped to examine the attitude of the respondents regarding (Training & Education) factor. It reports the means of respondents in the sample regarding this matter and the rank order.

Table5.12 Training &Education

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The university provides training and education to minimize the mistakes and achieving high level of quality	30.9	3.0	66.1	3.32	1.19	1
Training is focused on empowering people to take responsibility for quality.	72.2	1.0	26.8	2.28	1.1	4
Training is determined according to actual needs that have to be covered by training.	32.0	2.1	66.0	3.27	1.2	2
Training is provided equally to all the staff.	71.1	11.3	17.6	2.32	0.99	3
The university evaluates training output.	80.4	7.2	12.4	2.16	0.90	5
The university keeps training records as a guide for future training and development.	58.5	8.2	6.2	1.9	0.9	6
The overall of training & education				***2.54***	***0.61***	

As shown on Table (5.12), Statement No1, ”*The university provides training and education to minimize the mistakes and achieving high level of quality”* had the highest level of agreement with score mean (3.32) and (1.19) standard deviation.
On contrast, Statement 5 “*The University evaluates training output* “had the highest percentage in terms of disagreement (80.4%), with score mean (2.16) and (0.90) standard deviation.

The statement No 3 *"Training is determined according to actual needs that have to be covered by training"* had the second highest rank which (66%) of the respondents agreed with this statement with score mean of (3.27) and standard deviation (1.2).
Moreover, (71.1 %) disagree with the statement No 4 *“Training is provided equally to all the staff “with* score mean (2.32) and standard deviation (0.99).
Also (72.2 %) of the respondents disagreed with statement No 2 "*Training is focused on empowering people to take responsibility for quality"* with score mean (2.28) and standard deviation (1.1).

5.4.1.3 Continues Improvement

Table (6.13) includes six statements that were grouped to examine the attitude of the respondents regarding (Continues Improvement) factor. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.13 Continues Improvement

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
University management has a program to simplify the steps required to provide the service.	18.5	6.2	75.3	3.79	1.1	1
University management promotes and support all the ideas for quality improving	34.0	14.4	51.6	3.16	0.99	2
University management has method to analysis the activities required to provide the services.	87.6	6.2	6.2	1.99	0.97	6
University management adapts	33.0	32.0	35.1	3.01	0.6	4

future plans to improve the quality, not only focusing on solving only current problems.					5	
The university adopts the (never ending process) of improvement.	36.1	13.4	50.5	3.14	1.05	3
The management aimed to minimize the cost of different financial processes.	87.6	3.1	9.3	2.07	0.86	5
The overall of Continues improvement				***2.57***	***0.64***	

Descriptive analysis of the Continues improvement shows that the overall mean is **(2.57)** which is low compared with the ideal score mean **(5)** . Statement No 1" *University management has a program to simplify the steps required to provide the service"* had the highest rank with score mean (3.97) and standard deviation (1.1). However, item No 3 *"University management has method to analysis the activities required to provide the services."* had the lowest rank in this element with score mean (1.99) and (0.97) standard deviation. Moreover, statement No 6 *"The management aimed to minimize the cost of different financial processes"* had the second lowest rank with score mean (2.07) and (0.86) standard deviation.

Additionally, the statement No 2 *"University administration promotes and support all the ideas for quality improving "* had the second top ranked which (51.6%) of the respondents agreed with this statement with score mean (3.16) and standard deviation (0.99). On the other hand, (78.6 %) of the respondents disagreed with statement No 3 *"University administration use scientific approach which means collecting the appropriate data, identifying root causes of problems, and developing suitable solutions"* with score mean of (1.99) and standard deviation (0.97).

Finally, (50.5%) of the respondents agreed with the statement No 5*" The university adopts the (never ending process) of improvement "*with score mean (3.14) and standard deviation (1.05).

5.4.1.4 Student and Stakeholders

Table (5.14) includes five statements that were grouped to examine how the case study enables faculty and staff to develop and utilise their full potential aligned with the case study's objective. Also, it examine if the case study make efforts to build and maintain a work environment and a faculty and staff support climate conducive to performance excellence. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.14 Student &Stakeholders

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The University has some organized effort to understand the expectations of other sectors regarding graduates	16.5	2.1	81.5	3.58	0.99	1
The university actively communicates with students, community and education authorities, to make them understand the actions and university policy.	79.4	8.2	3.12	2.21	0.96	4
The university uses a variety of proactive method (e.g. students' surveys, focus group …) to determine student needs and their expectations	92.7	0	7.3	1.95	0.78	5
The university management listens to the stockholders and provides immediate solutions.	63.9	31	33	2.68	1.01	3

The university examines the student learning effect periodically and checks whether students meet original standards.	28.9	0	71.1	3.46	1.02	2
The overall of Student and stakeholders				***2.77***	***0.66***	

Descriptive analysis of the student& stockholders element shows that the overall mean is (2.77). The statement No 1 "*The University has some organized effort to understand the expectations of other sectors regarding graduates"* had the highest rank, which the majority (81.5%) of the respondents were agree with the statement, with score mean (3.58) and standard deviation (0.99).

On the other hand, the statement No 3 "*The University uses a variety of proactive method (e.g. students' surveys, focus group …) to determine student needs and their expectations"* had the lowest rank, which the majority (92.7%) disagreed with this statement. Statement No 5 "*The University examines the student learning effect periodically and checks whether students meet original standards"* had the second highest rank, which (71.1%) of the respondents agreed with this statement with score mean (3.46) and standard deviation (1.02).

Only (3.12%) of the respondents agreed with the statement No 2 "*The University actively communicates with students, community and education authorities, to make them understand the actions and university policy"* with score mean (3.58) and standard deviation (0.99).

On the other hand, (63.9%) of the respondents disagreed with the statement No 4 "*The university management listens to the stockholders and provides immediate solutions*" with score mean (2.68) and (1.01) standard deviation.

5.4.1.5 Employee's Involvement

Table (5.15) includes six statements that were grouped to examine the attitudes of the respondents regarding "Employees' involvement". It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.15 Employees Involvement

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The University management encourages employees to suggest new ideas for work improvement.	21.7	0	78.3	3.60	0.89	1
The university management shares its faculty in finding the suitable solutions to the problems that face the department	62.9	12.4	24.8	2.52	1.04	6
Work responsibilities are delegated to the employees.	27.8	16.5	55.7	3.29	0.92	2
Top management pushes decision making to the lowest level in order to encourage the employees involving in decision making.	55.7	3.1	41.3	2.74	1.18	5
The employees feel they really the most important resources in the University	43.3	1.0	55.7	3.13	1.04	3
The employees participate in problem- solving activities affecting their work.	39.2	11.3	49.5	3.08	1.03	4
The overall of Employee's involvement				***3.06***	***0.96***	

Table (5.15) illustrates the descriptive analysis of the (employees' involvement) factor. It shows that the overall score is (3.06) out of (5).

Statement No 1 "*The University management encourages employees to suggest new ideas for work improvement"* had the highest rank which the majority (78.3%) agreed with this statement with score mean (3.60) and (0.89) standard deviation.

On contrast, statement No 2 "*The university management shares its faculty in finding the suitable solutions to the problems that face the department*" had the lowest rank where the majority (62.9%) disagreed with this statement, score mean is (2.52) and standard deviation is (1.04).

Moreover, statement No 3 *"Work responsibilities are delegated to the employee"* had the second highest rank which (55.7%) of the respondents agreed with this statement with score mean (3.29) *and* standard deviation of (0.92).

Statement No 4 "*Top management push decision making to the lowest practical level in order to encourage the employees involving in decision making"* had the fifth rank which (55.7%) of the respondents with this statement with (2.74) score mean and (1.18) standard deviation.

Finally statement No 6 "*The employees participate in problem- solving activities affecting their work."* had score mean of (3.08) and standard deviation of (1.03) which (49.5%) agreed with this statement.

5.4.1.6 Organizational Structure

Table (5.16) includes seven statements that were grouped to examine the attitudes of the respondents regarding "Structure & System" factor. It reports the means of respondents in the sample regarding this matter and the rank order.

The category examines, through seven questions, the structure of the case study, and how the top management communicates with other management levels. This element examines the flow of information from top to bottom and vice versa.

Table 5.16 Organizational Structure

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
University administration believes that it is necessary to exchange information with the staff, and different departments with each other.	16.5	0	83.5	3.74	0.85	1
A system in place allows the university knowing the need of faculty, staff, and students through the communications channels or meetings.	72.2	0	27.9	2.34	1.16	7
There is a clear definition and concept of the list of tasks to be carried out by the all staff.	25.8	3.1	71.1	3.51	1.00	2
The long terms goals of the university based on students and stakeholders requirements, the performance of comparable universities and key benchmarks.	23.7	34.0	42.3	3.14	0.95	5
There is effective communication system within the university to ensure the flow of information and data vertically (from top to bottom and vice versa), as well as horizontally between the department in order to achieve the objectives of the university.	68.1	1.0	29.9	2.55	1.19	6
There is a constant communication between faculty, administrations and programme managers through meetings in order to make university fully aware of any change.	35.0	8.2	56.7	3.33	1.10	3
University has a clear procedures for employees' reward and penalties and applies them transparently	15.4	50.5	34.0	3.3	0.9	4
The overall of Structure and System				***3.13***	***0.96***	

Table (5.16) illustrated the descriptive analysis of the element of Structure & System. It shows that the overall score mean of this element is **(3.13)** out of **(5).** Statement No

1 "*University administration believes that it is necessary to exchange information with the staff, and different departments with each other*" had the highest rank with score mean (3.74) and (0.85) standard deviation, where the majority (83.5%) agreed with this statement.

On the other hand, the statement No 5" *There is effective communication system within the university to ensure the flow of information and data vertically (from top to bottom and vice versa), as well as horizontally between the department in order to achieve the objectives of the university"* had the lowest rank with score mean (2.55) and (1.19) standard deviation.

Statement No 3 *"There is a clear definition and concept of the list of tasks to be carried out by the all staff"* had the second highest rank, which (71.1%) of the respondents agreed with this statement with score mean of (3.51) and (1.00) standard deviation.

Moreover, (72.2%) of the respondents disagreed with the statement No 2 *"A system in place allows the university knowing the need of faculty, staff, and students through the communications channels or meetings"* with score mean (2.34) and (1.16) standard deviation. Statement No 4 *"The long terms goals of the university based on students and stakeholders requirements, the performance of comparable universities and key benchmarks "* had the fifth highest rank which (42.3%) of the respondents agreed with this statement.

Finally, (56.7 %) of the respondents agreed with the statement No 6 *"There is a constant communication between faculty, administrations and programme managers through meetings in order to make university fully aware of any change"* with score mean (3.33) and (1.10) standard deviation.

5.4.1.7 Financial Condition

Table (5.17) includes eight statements that were grouped to examine the attitudes of the respondents regarding "Financial condition" factor.

Table 5.17 Financial Condition

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
Financial resources available to the University are considered to be sufficient compared to the number of students enrolled to study at the university.	5.0	10.3	84.5	4.02	0.78	2
Financial resources available to the University are sufficient to support the scientific activities developed by the University.	22.6	7.2	70.1	3.69	1.1	4
Financial resources are available to train employees on the essential TQM techniques.	18.5	43.3	38.2	3.34	0.98	5
There is independence in the financial resources of the University to ensure that money is spent according to the needs and priorities of the university.	2.0	17.5	81.4	3.93	0.68	3
Sufficient financial resources are sufficient for providing the books and journals and other equipments.	4.1	6.2	89.7	4.10	0.73	1
Adequate financial resources are allocated to be spent on efforts to improve quality, and to encourage those who engaged in such business.	35.1	6.2	58.8	3.24	1.23	6
There is financial support from the university covering all the needs of scientific research carried out by members of the faculty and students.	40.3	6.2	53.6	3.24	1.23	7
The university makes a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality.	47.5	18.6	34.1	2.76	1.09	8
The overall of Financial Condition				***3.53***	***0.72***	

The average score of the eight items is **(3.53)** out of **(5).** This means that the financial condition at the case study had the highest average score among all the factors of

quality culture. Statement **No 5** *"Sufficient financial resources are sufficient for providing the books and journals and other equipments*" had the highest rank with score mean (4.10) and (0.73) standard deviation.

On contrast, the statement No 8 *"The university makes a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality"* had the lowest rank which (47.5%) of the respondents disagreed with this statement with score mean of (2.76) and standard deviation of (1.09).

High percentage of the respondents (84.5%) agreed with the statement No 1" *Financial resources available to the University are considered to be sufficient compared to the number of students enrolled to study at the university*" which had score mean of (4.02) and standard deviation of (0.78). As well as ,the statement No 4 " *There is independence in the financial resources of the University to ensure that money is spent according to the needs and priorities of the university"* had a high percentage of agreement which (81.4%) agreed with this statement with score mean (3.93) and standard deviation of (0.98). statement No 7 *"There is financial support from the university covering all the needs of scientific research carried out by members of the faculty and students "* had the score mean of (3.24) and (1.23) standard deviation which (53.6%) of the respondents agreed with this statement.

5.4.1.8 Academic Condition

Table (5.18) includes eight statements that were grouped to examine the attitudes of the respondents regarding "Academic condition" factor. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.18 Academic Condition

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The number of members of the faculty of the university is considered sufficient to the number of students.	8.2	18.6	73.2	3.82	0.85	1
University provides a system for faculty members and their associates allowing them the opportunity to participate in and contribute to scientific conferences and symposia.	33.1	10.3	56.7	3.37	1.13	2
The university has all the required services for the teaching staff such as: accommodation services, medical services and training services.	62.9	0	37.1	2.41	1.45	4
Appointments of academic staff are based on the necessary skills required by the positions in the light of the university‘s needs.	58.7	11.3	29.9	2.64	1.20	6
The selection of a teaching‘s staff member is carried out according to a good admission system and without any intervention.	51.5	3.1	45.4	2.86	1.23	5
The university periodically reviews the curriculum and the syllabus to meet the needs of the society and keeping pace with modern curriculum.	61.9	5.2	33.0	2.49	1.19	7
The admission system at the university is based on: the test score of every student, the needs of the labour market and the university’ infrastructure and facilities.	64.9	3.1	31.9	2.44	1.10	8
There is cooperation between research centre in the university and other sectors to meet the needs of the community.	42.3	21.6	36.1	2.87	1.06	3
The overall of Academic situation				***2.86***	***0.74***	

Table (5.18) illustrated the descriptive analysis of the element of Academic condition. It shows that the overall score mean of this element is **(2.86)** out of **(5).**

Statement No 1 *"The number of members of the faculty of the university is considered sufficient to the number of students"* had the highest rank with score mean of (3.82) and (0.85) standard deviation, the majority (73.2%) of the respondents agreed with this statement. On the other hand, statement No 7 *"the admission system at the university is based on: the test score of every student, the needs of the labour market and the university' infrastructure and facilities"* had the lowest rank which (64.9%) of the respondents agreed with this statement with (2.44) score mean and (1.1) standard deviation.

Statement No 2 *"University provides a system for faculty members and their associates allowing them the opportunity to participate in and contribute to scientific conferences and symposia",* had the second highest rank which (56.7%) of the respondents agreed with this statement with score mean of (3.37) and (1.13) standard deviation. statement No 3*" The University has all the required services for the teaching staff such as: accommodation services, medical services and training services*" had score mean of (2.41) and standard deviation of (1.45) which (62.9%) of the respondents agreed with this statement.

In addition, (58.7%) of the respondents disagreed with the statement No 4 *"Appointments to the academic positing are based on the necessary skills required by the positions in the light of the university's needs."* with score mean of (2.64) and (1.20) standard deviation.

Statement No 5 "The selection of a teaching's staff member is carried out according to a good admission system and without any intervention" had score mean of (2.86) and standard deviation of (1.23) which (51.5%) of the respondents disagreed with this statement.

Finally, (61.6%) of the respondents disagreed with the statement No 6 *"The university periodically reviews the curriculum and the syllabus to meet the needs of the society*

and keeping pace with modern curriculum" with score mean of (2.49) and standard deviation of (1.19).

The whole Quality Culture of the First Case Study

Table 5.19 Quality Culture

	Mean	Std. Deviation
Whole Culture	2.92	0.79

The Table (6.19) shows that the mean score mean of quality culture (2.92) out of (5) on five-likert scale. It means that the quality culture (as a whole) which consists of (8 critical success factors including: top management, training &education, continues improvement, student and stockholders, employees' involvement, structure and system, financial condition and Academic condition) is below the ideal situation.

The figure below is illustrated this results, and it shows the gap between the actual and ideal situation of the quality culture at the first case study through the critical success factors (CSFs). This is because the low level of practices of all the quality culture components.

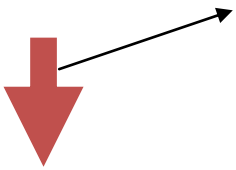

Figure 5.9 Gap between Ideal and Actual CSFs at (AGS)

5.4.2 The Second Case Study (FU)

5.4.2.1 Leadership

Table (5.20) includes five statements that were grouped to examine the attitude of the respondents regarding (Leadership) factor at the second case study. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.20 Leadership

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
Top management develops a university vision that incorporates quality value, performance expectation and focus on student and other stockholders.	67.1	3.3	29.6	2.39	1.22	2
Top management provides the guidance, means, and encouragement for all workers to follow for success.	68.4	2.0	29.6	2.46	1.21	1
Top management has a process in place to develop their awareness of the concept of TQM.	83.9	3.4	12.7	2.05	0.95	5
Top management reengineered and developed the organizational structure to suit the TQM concept.	70.5	4.7	24.9	2.38	1.21	3
Top management provides appropriate awards for person who brings up the ideas and method of improving the quality	69.8	5.4	24.8	2.33	1.24	4
The overall of Leadership				***2.31***	***0.95***	

The Table (5.20) shows the extent and degree of leadership and top management commitment in QM adoption in the second case study (FU). It shows that the score

mean of the leadership factor is **(2.31)** on the five-point likert scale, which the majority (83.9%) of the respondents disagreed with the statement No 3" *Top management has a process in place to develop their awareness of the concept of TQM.".* On the other hand, statement No 2 *"Top management provides the guidance, means, and encouragement for all workers to follow for success"* had the highest rank which (29.6 %) agreed with this statement with score mean (2.46) and standard deviation (1.21).

In addition , statement No 1 *"Top management develops a university vision that incorporates quality value, performance expectation and focus on student and other stockholders"* had the second highest rank which (29.6 %) agreed with this statement with score mean (2.39) and (1.22) standard deviation.

Moreover, (24.9%) of the respondents agreed with the statement No 4 *"Top management reengineered and developed the organizational structure to suit the TQM concept."* with score mean (2.38) and standard deviation (1.21).

Finally, Statement No 5 *"Top management provides appropriate awards for person who brings up the ideas and method of improving the quality"* had score mean of (2.33) and standard deviation of (1.24) which (69.8%) of the respondents disagreed with this statement.

5.4.2.2 Training & Education

Table (5.21) includes six statements that were grouped to examine the attitude of the respondents at the second case study regarding (Training & Education) factor. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.21 Training & Education

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The university provides training and education to help the people in the university to become competent at their current job.	57.7	0.7	41.6	2.66	1.3	1

Training is focused on empowering people to take responsibility for quality.	67.1	7.4	25.5	2.36	1.1	3
Training is determined according to actual needs that have to be covered by training.	66.84	3.4	28.2	2.38	1.2	2
Training is provided equally to all the staff.	69.8	14.1	16.2	2.20	1.1	4
The university evaluates training output.	78.5	6.0	15.5	2.00	1.1	5
The university keeps training records as a guide for future training and development.	79.9	11.4	8.8	1.9	0.9	6
The overall of training & education				***2.25***	***0.77***	

The Table (5.21) shows that a general disagreement with the all statements of the training & education element. The overall score average of this element is (**2.25)** out of five-point Likert scale.

Statement No 1 "*The University provides training and education to help the people in the university to become competent at their current job*" had the highest rank which **(41.6%)** agreed with this statement with score mean **(2.66)** and standard deviation **(1.3)**. On the other hand, Statement No 6 " *The University keeps training records as a guide for future training and development* " had the lowest rank with **(1.9)** score mean and **(0.9)** standard deviation which only (8.8%) of the respondents had agreed with this statement.

Statement No 3 *"Training is determined according to actual needs that have to be covered by training "* had the second highest rank which (28.2%) of the respondents agreed with this statement with score mean of (2.38) and standard deviation of (1.20). The third highest rank was the statement No 2 *"Training is focused on empowering people to take responsibility for quality* " with score mean of (2.36) and (1.1) standard deviation which (25.5%) of the respondents agreed with this statement.

Moreover, only (15.5%) of the respondents agreed with statement No 5 *"The University evaluates training output"* this statement with score mean of (2.00) and standard deviation of (1.1).

5.4.2.3 Continues Improvement

Table (5.22) includes six statements that were grouped to examine the attitude of the respondents regarding (continues improvement) factor.

Table 5.22 Continues improvement

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
University management has a program to simplify the steps required to provide the service.	52.4	4.7	42.9	2.96	1.31	1
University administration promotes and support all the ideas for quality improving	53.7	3.4	43.0	2.83	1.47	3
University management has method to analysis the activities required to provide the services.	86.6	2.7	10.7	1.83	1.04	6
University administration adapts future plans to improve the quality, not only focusing on solving only current problems.	56.8	8.7	23.5	2.41	1.24	4
The university adopts the (never ending process) of improvement.	49.7	8.1	42.3	2.89	1.19	2
The management aimed to minimise the cost of different financial processes.	84.6	5.4	10.1	1.87	0.91	5
The overall of continues improvement				***2.47***	***0.87***	

Descriptive analysis of continues improvement element of quality culture shows that score mean of this factor is **(2.47)** out of **(5).** Statement **No 1***" University management has a program to simplify the steps required to provide the service"* had the highest rank, which **(42.9%)** of the respondents agreed with this statement with **(2.96)** score mean and **(1.31)** standard deviation.

In contrast, the statement No 3 "*University management has method to analysis the activities required to provide the services"* had the lowest rank, which **(86.6%)** of the

respondents disagreed with this statement. The statement No 5 *"The university adopts the (never ending process) of improvement "had* the second highest rank which (42.3%) of the respondents agreed with this statement with score mean (2.89) and standard deviation of (1.19).

On the other hand, only (10.1%) of the respondents agreed with the statement No 6 "*The management aimed to minimise the cost of different financial processes "*with score mean of (1.87) and standard deviation of (0.91). In the meantime, (43%) of the respondents agreed with the statement No 2 *"University administration promotes and support all the ideas for quality improving"* with score mean of (2.83) and (1.47) standard deviation.

Finally, statement No 4 *"University administration adapts future plans to improve the quality, not only focusing on solving only current problems"* had the fourth highest rank with score mean of (2.41) and standard deviation of (1.24) which (23.5%) of the respondents agreed with this statement.

5.4.2.4 Students &Stockholders

Table (5.23) includes five statements that were grouped to examine how the case study enables faculty and staff to develop and utilise their full potential aligned with the case study's objective. Also, it examine if the case study make efforts to build and maintain a work environment and a faculty and staff support climate conducive to performance excellence. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.23 Students & Stockholders

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The University has some organised effort to understand the expectations of other sectors regarding graduates.	70.5	14.1	15.4	2.19	1.01	2

The university actively communicates with students, community and education authorities, to make them understand the actions and university policy.	80.5	6.7	12.8	2.01	0.94	4
The university uses a variety of proactive method (e.g. students' surveys, focus group …) to determine student needs and their expectations.	91.9	4.7	3.3	2.07	0.79	3
The university management listens to the stockholders and provides immediate solutions	88.6	9.4	2.0	1.76	0.74	5
The university examines the student learning effect periodically and checks whether students meet original standards.	71.4	5.4	23.5	2.30	1.11	1
The overall of students & stockholders				***2.07***	***0.75***	

Descriptive analysis of the Student and stockholders factor shows that the overall score mean is (2.07) out of (5). The majority of the respondents (91.9%) disagreed with the statement No 3 "*The University uses a variety of proactive method (e.g. students' surveys, focus group …) to determine student needs and their expectations* ". On contrast, the statement No 5 *"The University examines the student learning effect periodically and checks whether students meet original standards*" had the highest rank, where (23.5%) agreed with this statement with score mean (2.3) and (1.11) standard deviation.

Statement No 2 "*The University actively communicates with students, community and education authorities, to make them understand the actions and university policy"* had the second highest rank with score mean of (2.01) and standard deviation of (094).
Finally, (70.5%) of the respondents disagreed with the statement No 1 "*The University has some organized effort to understand the expectations of other sectors regarding graduates"* with score mean of (2.19) and standard devi

5.4.2.5 Employee' Involvement

Table (5.24) includes six statements that were grouped to examine the attitudes of the respondents regarding "Employees' involvement" factor. It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.24 Employee' Involvement

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The University management encourages employees to suggest new ideas for work improvement.	56.4	3.4	40.3	2.8	1.16	1
The university management shares its faculty in finding the suitable solutions to the problems that face the department	68.4	3.4	28.2	2.38	1.14	4
Work responsibilities are delegated to the employees.	74.5	6.7	18.8	2.14	1.24	6
Top management pushes decision making to the lowest level in order to encourage the employees involving in decision making.	58.4	18.8	22.8	2.50	1.02	2
Top management pushes decision making to the lowest level in order to encourage the employees involving in decision making.	65.1	10.7	24.2	2.31	1.14	5
The employees participate in problem- solving activities affecting their work.	63.8	6.0	30.2	2.48	1.17	3
The overall of employee's involvement				***2.38***	***0.73***	

Descriptive analysis employee' involvement factor of TQM shows that the overall score mean of this element is (2.38) out of (5). The majority **(74.5%)** of the

respondents disagreed with the statement No 3 *"Work responsibilities are delegated to the employees "* with score mean of (2.14) and standard deviation of (1.24). On the other hand, Statement No 1*"The University management encourages employees to suggest new ideas for work improvement"* had the highest rank of agreement which (40.3%) of the respondents agreed with this statement with score mean of (2.8) and standard deviation of (1.16). Moreover, statement No 4 *"Top management pushes decision making to the lowest level in order to encourage the employees involving in decision making"* had the second highest rank which (22.8%) of the respondents agreed with this statement with (2.5) score mean and (1.02) standard deviation.

Additionally, **(63.8 %)** of the respondents disagreed with the statement No 6 *"The employees participate in problem- solving activities affecting their work"* with score mean of (2.48) and standard deviation of (0.73).

5.4.2.6 Organisational Structure

Table (5.25) includes seven statements that were grouped to examine the attitudes of the respondents regarding "Structure & System" factor. It reports the means of respondents in the sample regarding this matter and the rank order.

The category examines, through seven questions, the structure of the case study, and how the top management communicates with other management levels. Moreover, this element examines the flow of information from top to bottom and vice versa.

Table 5.25 Organisational Structure

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
University administration believes that it is necessary to exchange information with the staff, and different departments with each other.	45.6	10.7	43.6	2.87	1.3	1
A system in place allows the university knowing the need of faculty, staff, and students through the communications channels or meetings.	38.2	1.3	15.5	1.91	1.14	7

There is a clear definition and concept of the list of tasks to be carried out by the all staff.	51.0	8.7	40.3	2.65	1.26	2
The long terms goals of the university based on students and stakeholders requirements, the performance of comparable universities and key benchmarks.	59.7	16.8	23.5	2.43	1.06	3
There is effective communication system within the university to ensure the flow of information and data vertically (from top to bottom and vice versa), as well as horizontally between the department in order to achieve the objectives of the university.	89.9	3.4	6.7	1.71	0.82	5
There is a constant communication between faculty, administrations and programme managers through meetings in order to make university fully aware of any change.	83.9	12.1	4	1.68	0.89	6
University has a clear procedures for employees' reward and penalties and applies them transparently	72.4	8.7	18.8	2.15	1.06	4
The overall of Structure & System				***2.20***	***0.68***	

Descriptive analysis of the structure & system factor shows that the score mean of this element is **(2.20)** on the five- point Likert scale.

Statement No 1 *"University administration believes that it is necessary to exchange information with the staff, and different departments with each other"* had the highest rank of agreement which (**43.6 %)** of the respondents agreed with the statement with score mean of **(2.87)** and standard deviation of **(1.3).** Meanwhile the statement No 3 "*There is a clear definition and concept of the list of tasks to be carried out by the all*

staff" had the second highest rank with **(2.65)** score mean and **(1.3)** standard deviation. On contrast, statement No 2 "*A system in place allows the university knowing the need of faculty, staff, and students through the communications channels or meetings "* had the lowest rank of agreement which only (15.5 %) agreed with this statement with score mean of **(1.91)** and standard deviation of **(1.1)**. Statement No 7 *"University has a clear procedures for employees' reward and penalties and applies them transparently"* had the fourth highest rank which (18.8%) of the respondents agreed with this statement with score mean of **(2.15)** and Standard deviation of **(1.06).** Moreover, (23.5%) of the respondents agreed with statement No 4 *"The long terms goals of the university based on students and stakeholders requirements, the performance of comparable universities and key benchmarks"* with score men of (2.43) and standard deviation of (1.06).

Finally, only (6.7%) of the respondents agreed with the statement No 5 *"There is effective communication system within the university to ensure the flow of information and data vertically (from top to bottom and vice versa), as well as horizontally between the department in order to achieve the objectives of the university"* with score mean of (1.77) and standard deviation of (0.82).

5.4.2.7 Financial Conditions

Table (5.26) includes eight statements that were grouped to examine the attitudes of the respondents regarding "Financial condition". It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.26 Financial Condition

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
Financial resources available to the University are considered to be sufficient compared to the number of students enrolled to study at the university.	77.2	6.0	16.8	2.07	1.11	4

Financial resources available to the University sufficient to support the scientific activities developed by the University.	78.5	9.4	12.0	2.13	0.92	3
Financial resources are available to train employees on the essential TQM techniques.	87.2	6.0	6.8	1.82	0.93	6
There is independence in the financial resources of the University to ensure that money is spent according to the needs and priorities of the university.	88.6	7.4	4.0	1.74	0.76	8
Allocated financial resources are sufficient for providing the books and journals and other equipments.	88.6	5.4	6.0	1.68	0.83	7
Adequate financial resources are allocated to be spent on efforts to improve quality, and to encourage those who engaged in such business.	87.9	1.3	10.7	1.84	0.90	5
There is financial support from the university covering all the needs of scientific research carried out by members of the faculty and students.	61.8	20.1	18.1	2.33	1.03	1
The university makes a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality.	72.5	1.3	26.2	2.32	1.11	2
The overall of Financial Condition				***1.99***	***0.60***	

Descriptive analysis of this factor in the university show that the score mean is **(1.99)** out of **(5).** Statement No 4" *There is independence in the financial resources of the University to ensure that money is spent according to the needs and priorities of the*

university" had the lowest rank, due the fact that the majority of the respondents **(88.6 %)** disagreed with this statement.

On contrast, statement No 7 *"There is financial support from the university covering all the needs of scientific research carried out by members of the faculty and students*" had the highest rank of agreement which 18.1% of the respondents agreed with this statement with score mean of (2.33) and standard deviation of (1.03). In the meantime the statement No 8 *"The University makes a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality"* had the second highest rank of agreement which (26.2%) of the respondents agreed with this statement with score mean of (2.32) and standard deviation of (1.11). Statement No 2 *"Financial resources available to the University sufficient to support the scientific activities developed by the University"* had (2.13) score mean and standard deviation of (0.92) which (12.0%) of the respondents agreed with this statement. In addition, (16.8%) of the respondents agreed with statement No 1 *"Financial resources available to the University are considered to be sufficient compared to the number of students enrolled to study at the university"* with score mean of (2.07) and standard deviation of (1.11).

Statement No 3 *"Financial resources are available to train employees on the essential TQM techniques" had* score mean of (1.82) which (6.8%) of the respondents agreed with this statement.

Finally, only (10.7%) of the respondents agreed with the statement No 6 *"Adequate financial resources are allocated to be spent on efforts to improve quality, and to encourage those who engaged in such business"* had score mean of (1.84) and standard deviation of (0.90).

5.4.2.8 Academic Conditions

Table (5.27) includes eight statements that were grouped to examine the attitudes of the respondents regarding "Academic condition" factor. It reports the means of respondents in the sample regarding this factor and the rank order.

Table 5.27 Academic Condition

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D	Rank
The number of members of the faculty of the university is considered sufficient to the number of students.	83.9	4.7	11.4	1.87	0.95	8
University provides a system for faculty members and their associates allowing them the opportunity to participate in and contribute to scientific conferences and symposia.	59.1	13.4	27.5	2.56	1.02	1
The university has all the required services for the teaching staff such as: accommodation services, medical services and training services.	82.6	10.7	6.7	1.89	0.85	7
Appointments of academic staff are based on the necessary skills required by the positions in the light of the university‘s needs.	63.1	14.8	22.1	2.43	1.06	3
The selection of a teaching‘s staff member is carried out according to a good admission system and without any intervention.	75.9	13.4	10.7	2.11	0.89	4
The university periodically reviews the curriculum and the syllabus to meet the needs of the society and keeping pace with modern curriculum.	71.8	18.8	9.4	2.05	0.94	5
The admission system at the university is based on: the test score of every student, the needs of the labour market and the university’ infrastructure and facilities.	73.8	17.4	8.7	2.14	0.98	2
There is cooperation between research centre in the university and other sectors to meet the needs of the community.	93.2	10.1	6.7	1.91	0.90	6
The overall of Academic Condition				***2.12***	***0.53***	

Descriptive analysis of the Academic factor shows that the overall mean of this factor is **(2.12)** which is low compared with the score of ideal score mean **(5).**

Statement No 1 *"The number of members of the faculty of the university is considered sufficient to the number of students"* had the lowest rank which only (11.4%) of the respondents agreed with this statement with score mean of (1.87) and standard deviation of (0.95). on contrast the statement No 2 *"University provides a system for faculty members and their associates allowing them the opportunity to participate in and contribute to scientific conferences and symposia "* which (27.5%) of the respondents agreed with this statement with score mean of (2.56) and standard deviation of (1.02). Statement No 8*" There is cooperation between research centre in the university and other sectors to meet the needs of the community* "had score mean of (1.91) and standard deviation of (0.90) which the majority **(93.2%)** disagreed with this statement.

Also**,** it can be noticed that **(73.8%)** of the respondents disagreed with the statement No 7*" The admission system at the university is based on: the test score of every student, the needs of the labour market and the university' infrastructure and facilities"* with score mean of (2.14) and standard deviation of (0.89).

Moreover, (75.9%) of the respondents agreed with the statement No 5 *"The selection of a teaching's staff member is carried out according to a good admission system and without any intervention"* with score men of (2.11) and standard deviation of (0.89). statement No 3 *"The university has all the required services for the teaching staff such as: accommodation services, medical services and training services"* had score mean of (1.89) and standard deviation of (0.85) which only (6.7%) of the respondents agreed with this statement.

Finally, only (9.4%) of the respondents had agreed with the statement No 6 *"The university periodically reviews the curriculum and the syllabus to meet the needs of the society and keeping pace with modern curriculum"* with score mean of (2.05) and (0.94) standard deviation.

The whole Quality Culture of the Second Case Study (FU)

Table 5.28 Quality Culture of the (FU)

	Mean	Std. Deviation
Quality culture of (FU)	2.21	0.58

The Table **(5.28)** shows that the mean score mean of quality culture at (FU) is **(2.21)** out of **(5)** on five-likert scale.

The figure below is illustrated this results, and it shows the gap between the actual and ideal situation of the quality culture at the (FU) through the critical success factors (CSFS). This is because the low level of practices of all the quality culture components.

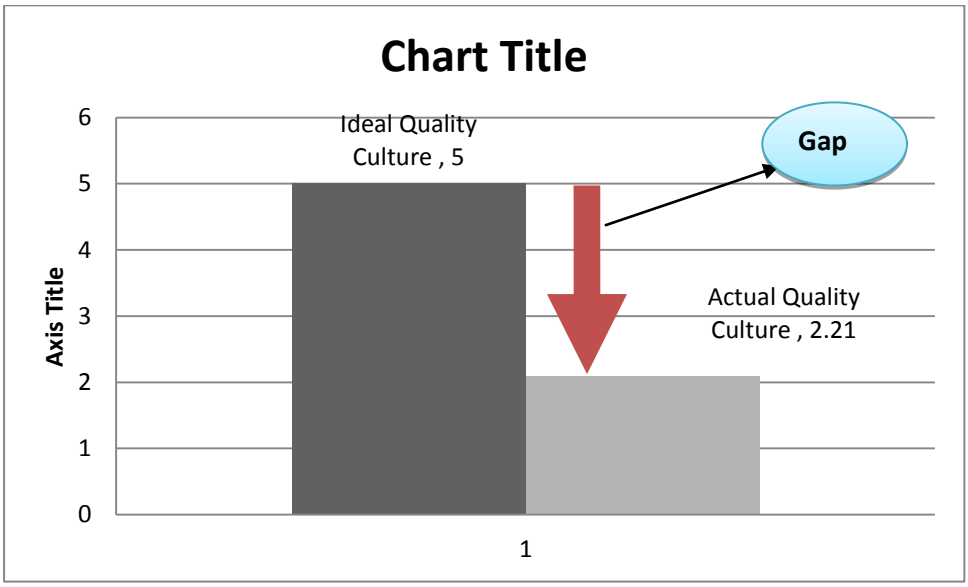

Figure 5.10 Gap between Ideal and Actual CSFs at (FU)

5.5 Student Satisfaction

As mentioned before that the SERVQUAL instrument was used to assess the student satisfaction through finding the gap between the perception and expectation of the services that provided to the students at the both case studies. It measures the difference between what is expected from a service encounter and the perception of the actual service encounter (Service Quality (Q) = Perception (P) - Expectation (E). This section presents the finding of student satisfaction at the both case studies through the: Tangibility; Reliability; Responsibility; security and Empathy factors.
Thus, this section presents the finding of student satisfaction in the both case studies.

5.5.1 First Case Study (AGS)

5.5.1.1 Expectation of Tangibility

Table (5.29) includes four statements that were grouped to examine the expectations (E) of the respondents regarding "Tangibility factor". It reports the means of respondents in the sample regarding this matter.

Table 5.29 Expectation of Tangibility

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
Excellent higher education institutions must have modern equipment, such as laboratories.	0.7	1.4	97.9	4.68	0.54
Employee and teachers at excellent institutions of higher education must present themselves (clothes, cleanliness, etc) in an appropriate manner for their position.	32.2	9.2	58.6	3.37	1.30
The material associated with the service provided in excellent higher, such as journals, printed matter, must have a good visual appearance and is up to date.	0	2.1	97.9	4.76	0.47
Higher education institutions must keep their records accurately	0.3	0.3	99.4	4.58	0.52
The overall of Tangibility				***4.35***	***0.41***

Descriptive analysis of the Tangibility expectation (E) shows that the overall mean is **(4.35).** The majority **(97.7%)** agreed with the statement **No 1**" *Excellent higher*

education institutions must have modern equipment, such as laboratories" **,** and No**3** "*The material associated with the service provided in excellent higher, such as journals, printed matter, must have a good visual appearance and is up to date*".

On the other hand, high percentage (32.2%) of the respondents were disagreed with the statement No 2 **"***Employee and teachers at excellent institutions of higher education must present themselves (clothes, cleanliness, etc) in an appropriate manner for their position."* with mean (3.73) and standard deviation (1.30).

5.5.1.2 Perception of Tangibility

Table (5.30) includes four statements that were grouped to examine the Perception (P) of the respondents regarding "Tangibility factor". It reports the means of respondents in the sample regarding this matter.

Table 5.30 Perception of Tangibility

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
The Academy has modern equipment, such as laboratories.	6.2	0	93.8	4.26	0.67
Employee and teachers at the Academy present themselves (clothes, cleanliness, etc) in an appropriate manner for their position.	22.9	18.2	58.9	3.39	1.05
The material associated with the service provided in the Academy, such as journals, printed matter, has a good visual appearance and is up to date.	40.7	2.7	56.5	3.20	1.11
Higher education institutions must keep their records accurately	8.9	11.6	79.4	4	0.97
The overall of Tangibility (PERSEPTION)				*3.71*	*0.62*

Descriptive analysis of the Tangibility perception **(P)** shows that the overall mean is **(3.50).** The majority **(93.8%)** agreed with the statement **No 1**" *The Academy has modern equipment, such as laboratories"* With score mean (4.26) and standard deviation **(0.67).** On the other hand**, (40.7%)** agreed with the statement **No3 "***The material associated with the service provided in the Academy, such as journals,*

printed matter, has a good visual appearance and is up to date" with score mean of (3.20) and standard deviation (1.11).

5.5.1.3 Gap between Expectation and Perception of Tangibility

Table 5.31 Tangibility gap

Factor	Expectation mean	Perception	Gap
Tangibility	4.35	3.71	0.64

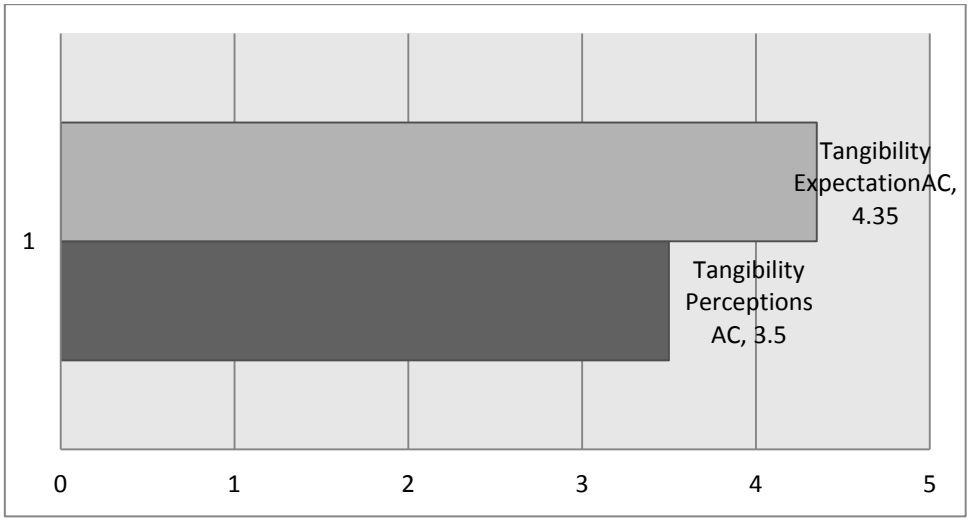

Figure 5.11 Gap between the Expectation and Perception of the Tangibility

The Figure (5.11) shows that the Tangibility expectation was **(4.35)** while the Tangibility perception was **(3.5)**. Thus, it was a gap between what the student expected and what they actually received it terms of Tangibility element.

5.5.1.4 Expectation of Reliability

Table (5.32) includes three statements that were grouped to examine the expectations **(E)** of the respondents regarding "Reliability factor". It reports the means of respondents in the sample regarding this matter.

Table 5.32 Expectation of Reliability

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
When excellent higher education institutions promise to do something in a certain time, they must do it					
When students have a problem, excellent institutions of higher education demonstrate since interest in solving it.					
Excellent higher education institutions will do the job right the first time and will persist in doing it without error					
The overall Reliability (Expectation)				***4.70***	***0.30***

The Table (5.32) shows that the overall score mean of this factor is **(4.70).** All of the respondents agreed with the all statements, and there was no one of the respondents who disagreed with these statements. This means that the students' expectation for this factor was very high.

5.5.1.5 Perception of Reliability

Table (5.33) includes three statements that were grouped to examine the Perception **(P)** of the respondents regarding "Reliability factor". It reports the means of respondents in the sample regarding this matter.

Table 5.33 Perception of Reliability

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
When the Academy promise to do something in a certain time, it do it	19.9	9.6	70.6	3.55	0.96

When students have a problem, the Academy demonstrates since interest in solving it.	8.9	7.5	83.6	3.80	0.80
The Academy do the job right the first time and it persists in doing it without error	61.6	7.9	30.5	2.69	0.91
The overall Reliability (Perception)				**3.35**	**0.56**

Table (5.33) shows that the overall score mean of the Reliability perception (P) is **(3.35)** and the standard deviation is **(0.56).** The majority **(83.6%)** agreed with the statement **No 2 "***When students have a problem, the Academy demonstrates since interest in solving it*"**.** On the other hand**, (61.6%)** disagreed with the statement **No3 "***The Academy do the job right the first time and it persists in doing it without error".*

5.5.1.6 Gap between Expectation and Perception of Reliability

Table 5.34 Result Gap

Factor	Expectation Mean	Perception Mean	Gap
Reliability	**4.70**	**3.35**	**1.35**

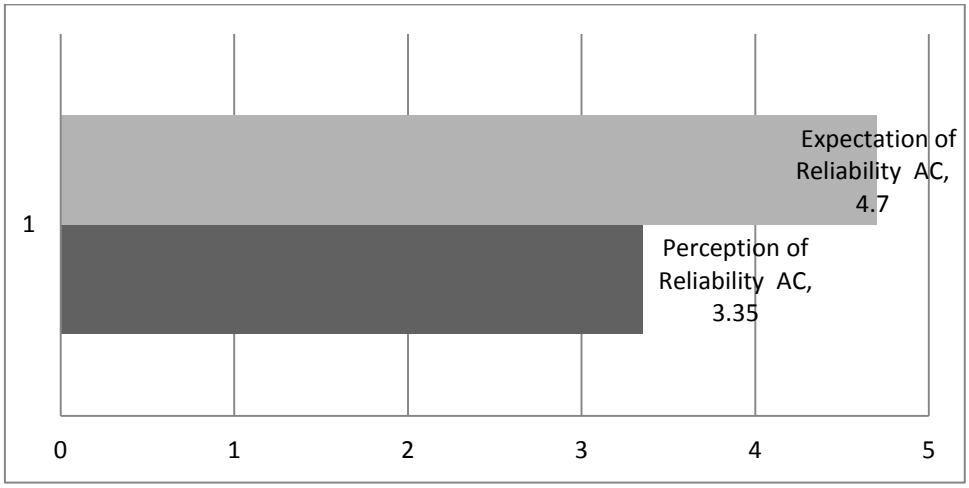

Figure 5.12 Gap between the Expectation and Perception of the Reliability

The Figure 6.12 shows that the Reliability expectations **(4.7)** while the Reliability perception was **(3.4)**. Thus, it was a gap between what the student expect and what they actually received it terms of Reliability element.

5.5.1.7 Expectation of Responsibility

Table (6.35) includes four statements that were grouped to examine the Expectation **(E)** of the respondents regarding "Responsibility factor".

Table 5.35 Expectation of Responsibility

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
School office staff /faculty in the excellent higher institutions tell me exactly when they are able to attend my request.	0	2.1	97.9	4.74	0.49
Employee and teachers at excellent institutions of higher education are willing and available during service providing	0.3	8.6	91.1	4.64	0.65
Employee and teachers at excellent institutions of higher education will also show good in helping their students.	0	2.1	97.9	4.72	0.66
Employee and teachers at excellent institutions of higher education are willing to explain doubts to their students	1.0	6.2	92.8	4.72	0.62
overall of the Responsibility (Expectation)				***4.7***	***0.32***

Descriptive analysis of the perception of Responsibility **(P)** shows that the overall score mean of this factor is **(4.7)**. The majority of the respondents agreed with all the statements.

5.5.1.8 Perception of Responsibility

Table (6.36) includes four statements that were grouped to examine the perception of Responsibility **(P)** of the respondents regarding "Responsibility factor". It reports the means of respondents in the sample regarding this matter.

Table 5.36 Responsibility Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
School office staff /faculty in the Academy tell me exactly when they are able to attend my request.	16.1	8.9	75.0	3.65	0.92
Employee and teachers at the Academy are willing and available during service providing	90.7	3.1	6.2	2.07	0.60
Employee and teachers at the Academy will also show good in helping their students.	11.3	8.9	79.8	3.77	0.95
Employee and teachers at the academy are willing to explain doubts to their students	5.4	6.2	88.3	3.91	0.72
The overall of the Responsibility (Perception)				***3.35***	***0.40***

The Table (5.36) shows that the overall score mean of perception of Responsibility was **(3.35)**. The majority **(90.7%)** of the respondents disagreed with the statement No 2 "*Employee and teachers at the Academy are willing and available during service providing*". On the other hand, (88.3%) of the respondents agreed with the statement No 4 *"Employee and teachers at the academy are willing to explain doubts to their students"* with score mean of (3.91) and standard deviation of (0.72).

5.5.1.9 Gap between Expectation and Perception of Responsibility

Table 5.37 Responsibility Gap

Factor	Expectation Mean	Perception Mean	Gap
Responsibility	4.71	3.35	1.36

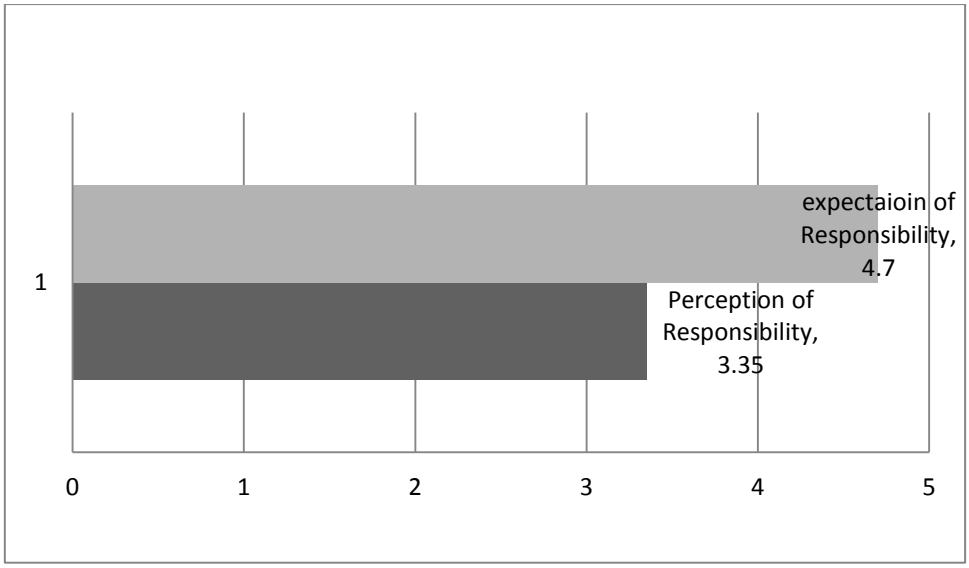

Figure 5.13 Gap between the Expectation and Perception of the Responsibility

The Figure 6.13 shows that the Responsibility expectations (4.35) while the Responsibility perception was (3.35). Thus, it was a gap between what the students expect and what they actually received it terms of Responsibility element.

5.5.1.10 Expectation of Security

Table (5.38) includes four statements that were grouped to examine the perception of Security (P) of the respondents regarding "Security factor". It reports the means of respondents in the sample regarding this matter and the rank order.

Table 6.38 Security Expectation

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
The behaviour of Employee and teachers at excellent institutions of higher education must inspire confidence in the students.	14.0	7.2	78.8	4.06	1.05
Students at excellent institutions of higher education feel safe in their transaction with the institutions	9.2	31.5	59.2	3.59	0.82
Employee and teachers at excellent institutions of higher education must be polite to the students	0	3.1	96.9	4.43	0.56
Employee and teachers at excellent	1.4	1.4	97.2	4.46	0.6

institutions of higher education must have the knowledge needed to answer the questions of the students					0
The overall of Security (Expectation)				***4.14***	***0.37***

The Table (5.38) shows that the overall score mean of expectation of Responsibility is **(4.18).**The majority **(97.2%)** of the respondents agreed with the statement No 4" *Employee and teachers at excellent institutions of higher education must have the knowledge needed to answer the questions of the students"* . On the other hand only (14.0%) disagreed with the statement No1*" The behaviour of Employee and teachers at excellent institutions of higher education must inspire confidence in the students"*.

5.5.1.11 Perception of Security

Table (5.39) includes four statements that were grouped to examine the perception of Security (P) of the respondents regarding "Security factor". It reports the means of respondents in the sample regarding this matter.

Table 5.39 Security Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
The behaviour at Academy institutions of inspires confidence in the students.	64.7	2.7	32.6	2.62	1.17
Students at Academy institutions feel safe in their transaction with the institutions	0	14.7	84.3	4.17	0.38
Employees and teachers at Academy institutions are polite to the students	42.8	10.6	46.5	3.01	1.24
Employee and teachers at Academy institutions have the knowledge needed to answer the questions of the students	13.4	0	86.6	3.89	0.82
The overall of Security (Perception)				***3.42***	***0.42***

The Table (5.39) shows that the overall score mean of perception of Security is **(3.42)** with standard deviation **(0.42)**. The majority **(86.6%)** of the respondents agreed with

the statement No 4 "*Employee and teachers at Academy institutions have the knowledge needed to answer the questions of the students"*. On the other hand, (42.8%) of the respondents disagreed with the statement No 3 *"Employees and teachers at Academy institutions are polite to the students"* with score mean of (3.01) and standard deviation of (1.24).

5.5.1.12 Gap between Expectation and Perception of Security

Table 5.40 Responsibility gap

Factor	Expectation Mean	Perception Mean	Gap
Security	**4.14**	**3.42**	**-0.72**

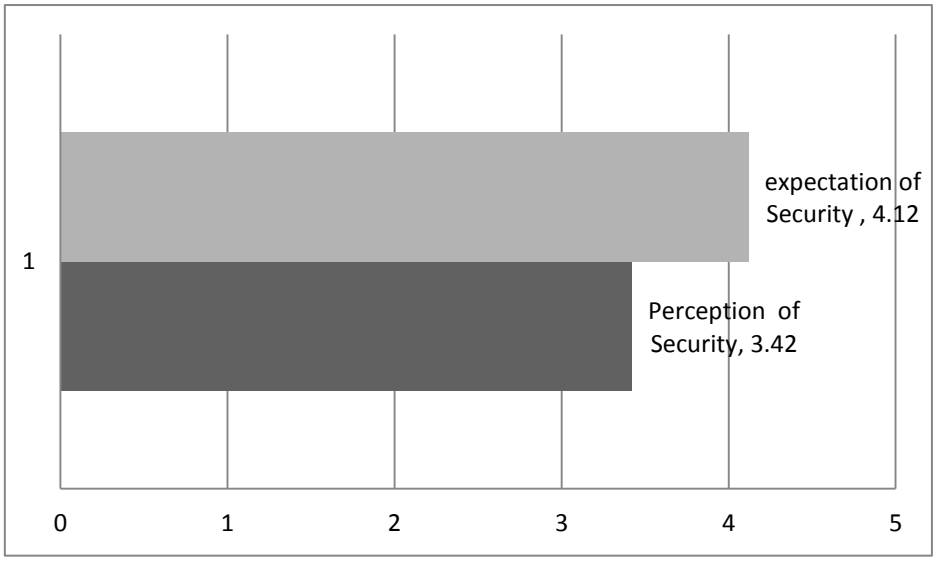

Figure 5.14 Gap between the Expectation and Perception of Security

The Figure 6.14 shows that the Responsibility expectations (4.12) while the Responsibility perception was (3.42). Thus, it was a gap between what the students expect and what they actually received it terms of Security element.

5.5.1.13 Expectation of Empathy

Table (5.41) includes four statements that were grouped to examine the expectation of Empathy (E) of the respondents regarding "Empathy factor". It reports the means of respondents in the sample regarding this matter.

Table 5.41 Empathy Expectation

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
Excellent institutions of higher education must have convenient business hours of all students	0	0	100	4.76	0.43
Excellent institutions of higher education must have employees and teachers who provide individual attention to each one.	2.7	7.5	89.8	4.34	0.73
Excellent institutions of higher education must understand the specific needs of every student	5.5	1	93.5	4.47	0.84
Employee and teachers at excellent institutions of higher education must be focused on the best service for their students	0	0.7	99.3	4.79	0.43
The overall of the Empathy (Expectations)				***4.59***	***0.37***

The Table (5.41) shows that the overall score mean of expectation of Empathy is **(4.59).** All the respondents **(100%)** agreed with the statement No 1" *Excellent institutions of higher education must have convenient business hours of all students"*. On the other hand only **(5.5%)** disagreed with the statement No3" *Excellent institutions of higher education must understand the specific needs of every student"*. That indicates to the high level of student expectations in terms of this element.

5.5.1.14 Perception of Empathy

Table (5.42) includes four statements that were grouped to examine the expectation of Empathy (P) of the respondents regarding "Empathy factor". It reports the means of respondents in the sample regarding this matter.

Table 5.42 Empathy Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
Academy institution has convenient business hours of all students	56.5	5.8	37.7	2.87	1.14
Academy institutions has employees and teachers who provide individual attention to each	41.5	12.3	46.2	3.16	1.17
Academy institution understand the specific needs of every student	30.5	2.7	66.8	3.39	1.12
Employee and teachers at Academy institution focus on the best service for their students	5.8	5.8	88.4	3.98	0.67
The overall of the Empathy (Expectation)				***3.35***	***0.46***

The Table (5.42) shows that the overall score mean of perception of Security is **(3.35)**. The majority **(88.4%)** of the respondents agreed with the statement No 4 *" Employee and teachers at Academy institution focuses on the best service for their students"* with score mean of (3.98) and standard deviation of (0.67).

5.5.1.15- Gap between Expectation and Perception of Empathy

Table 5.43 Gap of Empathy

Factor	Expectation Mean	Perception Mean	Gap
Empathy	**4.59**	**3.35**	**-1.24**

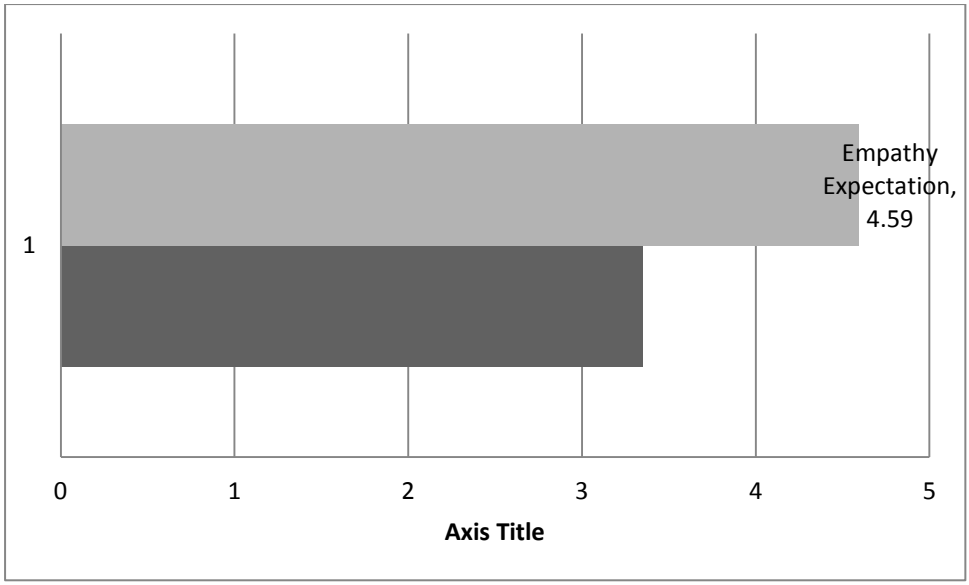

Figure 5.15 gap between the Expectation and Perception of the Empathy

The Figure 6.15 shows that the Empathy expectations **(4.35)** while the Empathy perception was **(3.5)**. Thus, it was a gap between what the student expects and what they actually received it terms of Empathy element.

5.5.1.16 Service Quality at the First Case Study (AGS)

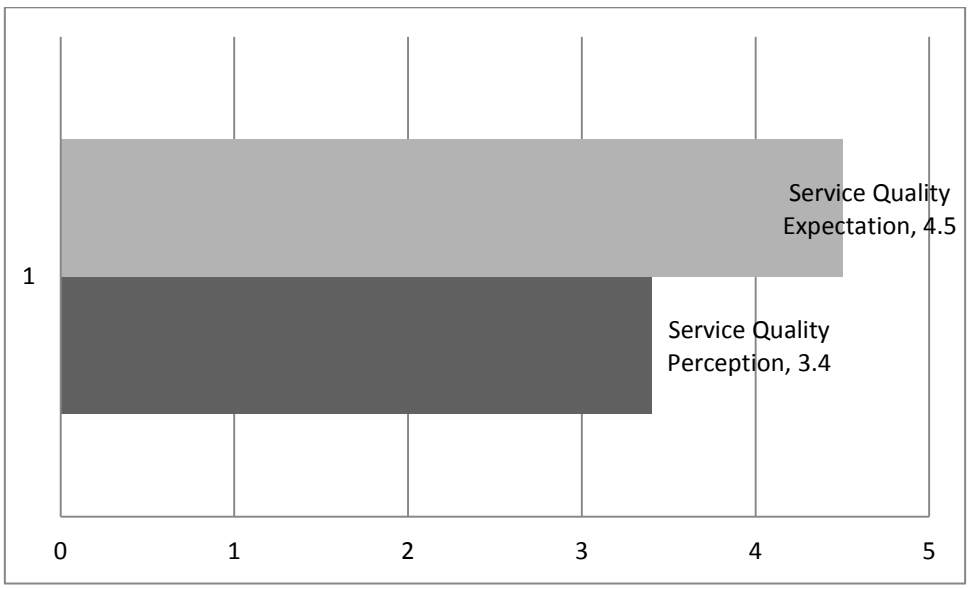

Figure 5.16 the Service Quality at the First Case Study (AGS).

The Figure 5.16 shows that the Service quality expectation was **(4.5)** while the Service quality perception was **(3.4)** at the first case study (AGS).

5.5.2 Second Case Study (FU)

5.5.2.1 Expectation of Tangibility

Table (5.44) includes four statements that were grouped to examine the expectation of Tangibility **(E)** of the respondents regarding "Tangibility factor". It reports the means of respondents in the sample regarding this factor and the rank order.

Table 5.44 Tangibility Expectation

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
Excellent higher education institutions must have modern equipment, such as laboratories.	2.7	1.3	96.1	4.61	0.72
Employee and teachers at excellent institutions of higher education must present themselves (clothes, cleanliness, etc) in an appropriate manner for their position.	7.5	8.3	84.2	4.09	0.92
The material associated with the service provided in excellent higher, such as journals, printed matter, must have a good visual appearance and is up to date.	0	2.6	97.4	4.77	0.48
Higher education institutions must keep their records accurately	0	2.3	97.7	4.74	0.49
The overall of Tangibility (Expectation)				***4.55***	***0.36***

The Table (5.44) shows that the overall score mean of expectation of Tangibility is **(4.55)**. The majority **(97.7%)** of the respondents agreed with the statement No 4" *Higher education institutions must keep their records accurately"*. On the other hand only **(7.5 %)** disagreed with the statement No2 "*Employee and teachers at excellent institutions of higher education must present themselves (clothes, cleanliness, etc) in an appropriate manner for their position*. That indicates to the high level of student expectations in terms of this element.

5.5.2.2 Perception of Tangibility

Table (5.45) includes four statements that were grouped to examine the expectation of Tangibility (P) of the respondents regarding "Tangibility factor". It reports the means of respondents in the sample regarding this factor.

Table 5.45 Tangibility Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
El-Fath University has modern equipment, such as laboratories.	89.4	10.6	0	1.7	0.62
Employee and teachers in El-Fath University present themselves (clothes, cleanliness, etc) in an appropriate manner for their position.	56.9	4.3	38.7	2.7	1.16
The materials associated with the service provided by El-Fath University, such as journals, printed matter, have a good visual appearance and are up to date.	96	4	0	1.48	0.57
El-Fath University keeps their records accurately	87.4	12.6	0	1.91	0.58
The overall of Tangibility (Expectation)				***1.95***	***0.33***

Table (5.45) above shows that the statement No 2" *Employee and teachers El-Fath University present themselves (clothes, cleanliness, etc) in an appropriate manner for their position"* had the highest rank with score mean **(2.7)** and **(38.7%)** of agreement. On the other hand, the statement No 3" *The material associated with the service provided by El-Fath University, such as journals, printed matter, have a good visual appearance and is up to date"* had the lowest score mean **(1.48)** and no one from the respondents agreed with this statement, while only **(4%)** were not sure about this statement.

5.5.2.3 Gap of Tangibility

Table 5.46 Gap of Tangibility

Factor	Expectation Mean	Perception Mean	Gap
Tangibility	**4.55**	**1.95**	**2.60**

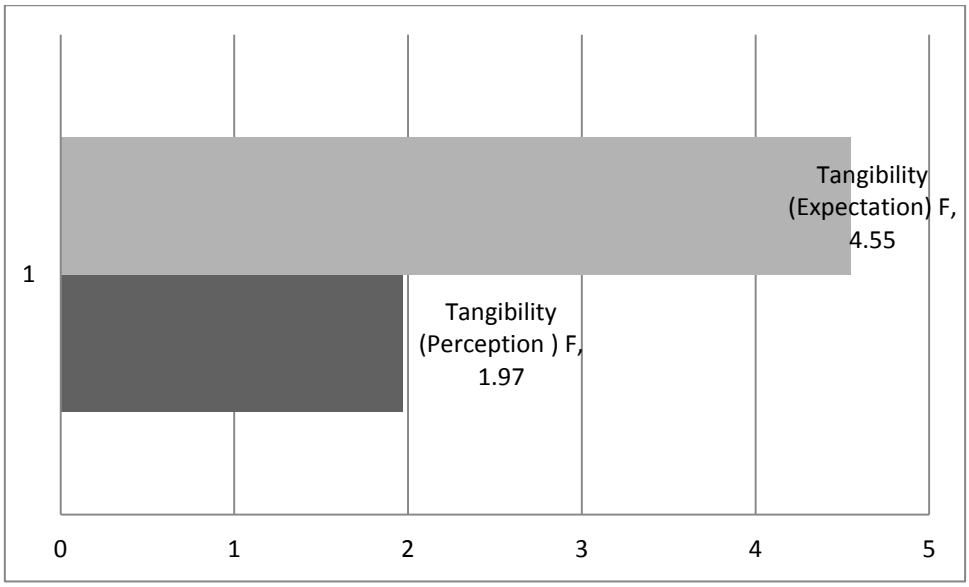

Figure 5.17 Gap between the Expectation and Perception of the Tangibility

Figure (6.17) shows that the total average score of the Tangibility (Expectation) was **(4.55)**, in contrast, the total average of Tangibility (Perception) was **(1.97)**. This means that there is a huge gap between the expectation and perception of the quality service in terms of Tangibility factor.

5.5.2.4 Expectation of Reliability

Table (6.47) includes three statements that were grouped to examine the expectation of Reliability **(E)** of the respondents regarding "Reliability factor". It reports the means of respondents in the sample regarding this factor.

Table 5.47 Reliability Expectations

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
When excellent higher education institutions promise to do something in a certain time, they must do it.	0	2.3	97.7	4.66	0.52
When students have a problem, excellent institutions of higher education demonstrate since interest in solving it.	0	4.3	95.6	4.74	0.53
Excellent higher education institutions will do the job right the first time and will persist in doing it without error	0	1.7	98.3	4.63	0.52
The overall of Reliability Expectation				***4.67***	***0.32***

Table (5.47) shows that the statement No2*"When students have a problem, excellent institutions of higher education demonstrate since interest in solving it"* had the highest rank with score mean **(4.74)** and **(95.6%)** of agreement. The total average score of the Reliability (Expectation) of the (FU) was **(4.67)** with standard deviation **(0.32)**.

5.5.2.5 Perception of Reliability

Table (5.48) includes four statements that were grouped to examine the expectation of Reliability **(P)** of the respondents regarding "Reliability factor". It reports the means of respondents in the sample regarding this factor and the rank order.

Table 5.48 Reliability Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
When El-Fath University promises to do something in a certain time, it does it.	80.1	15.2	4.6	2.02	0.75
When students have a problem, El-Fath University demonstrates since interest in solving it.	86.1	6.3	7.6	2.08	0.71
El-Fath University do the job right the first time and persists in doing it without error	83.7	8.6	7.6	1.89	0.85
The overall of Reliability Perception				***2.00***	***0.52***

It can be noticed from the above table that the statement No 2 *" When students have a problem, El-Fath University demonstrates since interest in solving it "* had the highest rank of disagreement **(86.1%)** with score mean **(2.08)** and **(0.71)** standard deviation. On the other and only **(7.6%)** of the respondents agreed with the statement No3 "*El-Fath University do the job right the first time and persists in doing it without error"*, the total average score of Reliability' Perception was **(2.00)**.

5.5.2.6- Gap of Reliability

Table 5.49 Reliability Gap

Factor	Expectation Mean	Perception Mean	Gap
Reliability	**4.67**	**2.00**	**2.67**

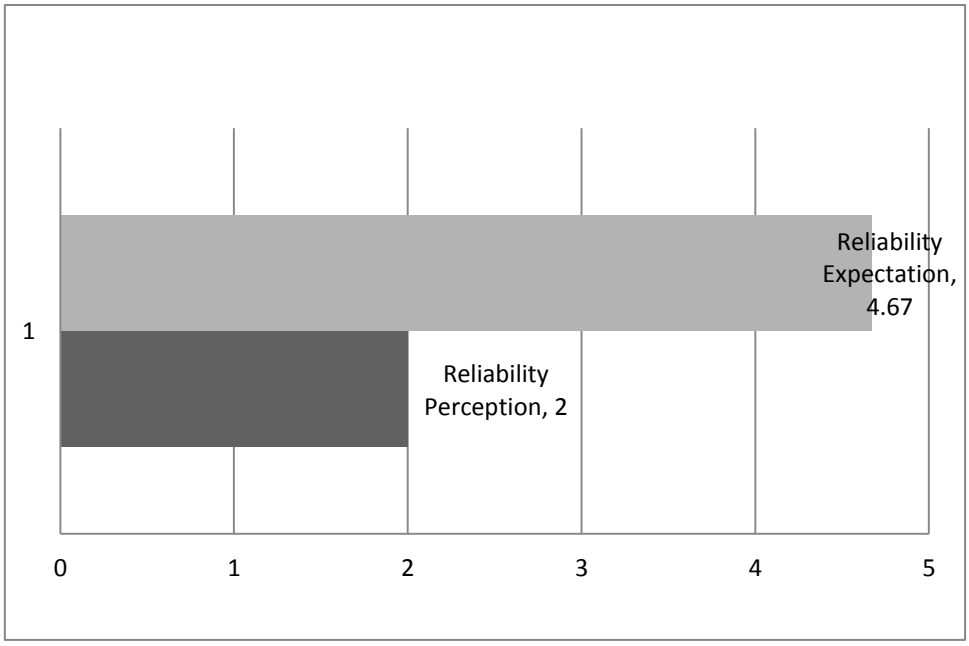

Figure 5.18 Gap between the Expectation and Perception of the Reliability

Figure (6.17) shows the gap between the Perception of the Reliability at El-Fath University (2) and the Expectation of this category (4.67).

5.5.2.7 Expectation of Responsibility

Table (5.50) includes four statements that were grouped to examine the Expectation (E) of the respondents regarding "Responsibility factor". It reports the means of respondents in the sample regarding this matter.

Table 5.50 Responsibility Expectation

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
When Employee and teachers at excellent institutions of higher education promise to do something by a certain time, they must do so.	0	2.9	98.0	4.76	0.47
Employee and teachers at excellent institutions of higher education are willing and available during service providing	0	9.6	90.4	4.56	0.66
Employee and teachers at excellent institutions of higher education will also show good in helping their students	2.0	4.3	93.7	4.71	0.64
Employee and teachers at excellent institutions of higher education are willing to explain doubts to their students	0	3.6	96.4	4.79	0.49
The overall of the Responsibility				***4.71***	***0.33***

Table (5.50) shows that the overall score of the Responsibility factor is **(4.71)**. All the respondents agreed with statements except **(2.0%)** of the respondents disagreed with the statement No 3 *"Employee and teachers at excellent institutions of higher education will also show good in helping their students"* with score mean of (4.71) and standard deviation (0.64).

5.5.2.8 Perception of Responsibility

Table (6.51) includes four statements that were grouped to examine the perception of Responsibility (P) of the respondents regarding "Responsibility factor". It reports the means of respondents in the sample regarding this matter and the rank order.

Table 5.51 Responsibility Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
When Employee and teachers at El-Fath University promise to do something by a certain time, they do so.	90.1	8.3	1.7	1.93	0.58
Employee and teachers at El-Fath University are willing and available during service providing	91.0	3.6	5.3	1.76	0.76
Employee and teachers of El-Fath University show good in helping their students	61.2	12.9	25.8	2.54	0.99
Employee and teachers in El-Fath University are willing to explain doubts to their students	63.2	14.9	21.9	2.39	1.03
The overall of the Responsibility				**2.15**	**0.55**

It can be seen from the Table (5.51) that the statement the overall score mean of this factor is (2.15) with standard deviation of (0.55). The statement No 2 *" Employee and teachers at Elfath University are willing and available during service providing"* had the highest percentage of disagreement **(91.0%)**. On the other hand the statement No 3" *Employee and teachers at excellent institutions of higher education will also show good in helping their students"* had the highest rank of agreement (25.8%).

5.5.2.9- Gap of Responsibility

Table 5.52 Responsibility Gap

Factor	Expectation Mean	Perception Mean	Gap
Responsibility	**4.71**	**2.15**	**2. 56**

Figure (5.18) illustrates the gap between the Expectation of Responsibility and the Perception of Responsibility.

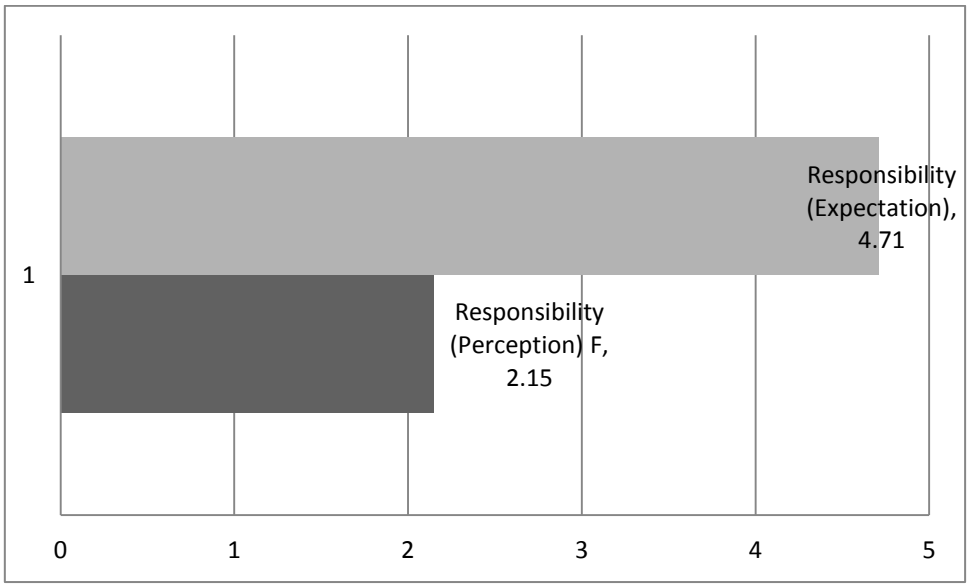

Figure 5.19 Responsibility gap

The Figure (5.19) illustrates that there is a negative gap between the Expectation of the Responsibility (4.71) and the Perception of this category (2.15).

5.5.2.10 Expectation of Security

Table (6.53) includes four statements that were grouped to examine the perception of Security **(P)** of the respondents regarding "Security factor". It reports the means of respondents in the sample regarding this matter.

Table 5.53 Security Expectation

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
The behaviour of Employee and teachers at excellent institutions of higher education must inspire confidence in the students.	13.6	6.3	80.1	4.05	1.03
Students at excellent institutions of higher education feel safe in their transaction with the institutions	9.0	31.5	59.7	3.62	0.83
Employee and teachers at excellent institutions of higher education must be polite to the students	0	4.3	95.7	4.48	0.58

Employee and teachers at excellent institutions of higher education must have the knowledge needed to answer the questions of the students	3.0	1.7	96.4	4.47	0.63
The overall of Security Expectation				***4.16***	***0.38***

It appears from the Table (5.51) that the overall mean of the security factor is **(4.16)** with standard deviation of **(0.38).** The statement No 4*" Employee and teachers at excellent institutions of higher education must have the knowledge needed to answer the questions of the students"* had the highest percentage **(96.4%)** of agreement with score mean of (4.47) and standard deviation of (0.63).

5.5.2.11 Perception of Security

Table (5.54) includes four statements that were grouped to examine the perception of Security **(P)** of the respondents regarding "Security factor". It reports the means of respondents in the sample regarding this matter.

Table 5.54 Security Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
The behaviour of Employee and teachers in El-Fath University inspire confidence in the students.	69.9	21.5	8.6	2.17	0.87
Students at El-Fath University feel safe in their transaction with the institutions	46.4	40.7	13.0	2.55	0.88
Employees and teachers at El-Fath University are be polite to the students	31.2	12.6	56.3	3.25	1.17
Employees and teachers at El-Fath University have the knowledge needed to answer the questions of the students	15.2	9.3	75.5	3.66	1.13
The overall of Security Perception				***2.91***	***0.51***

Table (5.54) shows that the overall mean of the perception of the security factor is **(2.91)**. Statement No1*" The behaviour of Employee and teachers El-Fath University inspire confidence in the students"* had the highest rank of disagreement **(69.9%)** with score mean (2.17) and (0.87) standard deviation.

On the other hand, the statement No 4 "*Employees and teachers at El-Fath University has the knowledge needed to answer the questions of the students"* had the highest rank of agreement (75.5%) with score mean of (3.66) and standard deviation of (1.13).

5.5.2.12 Security Gap

Table 5.55 Security Gap

Factor	Expectation Mean	Perception Mean	Gap
Security	**4.16**	**2.91**	**1.25**

Figure (5.19) illustrates the gap between the Expectation of and the Perception of Security.

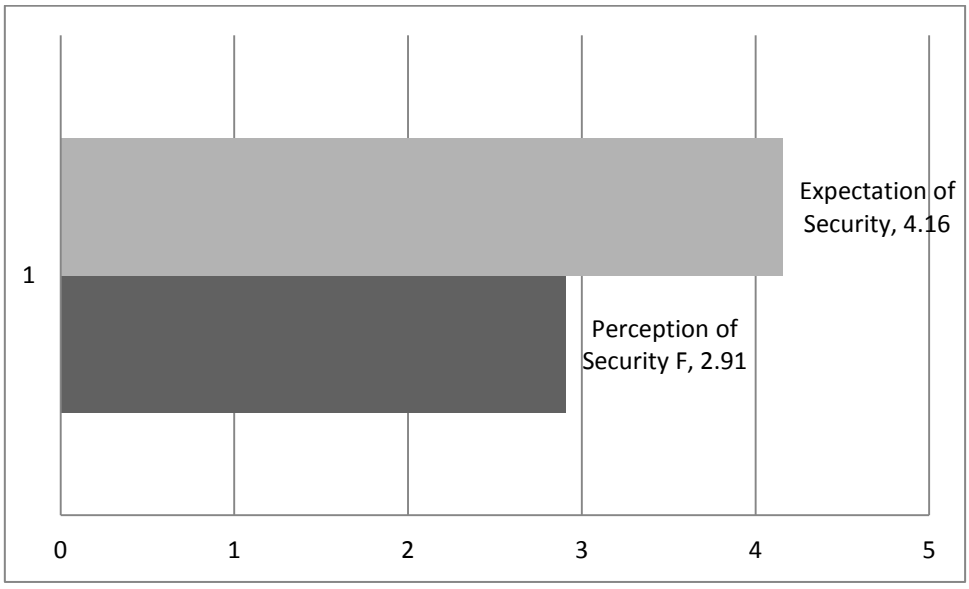

Figure 5.20 Security Gap

Figure (5.19) shows that there is a gap between the Expectation of Security at the El-Fath University **(4.16)** and the Perception of this category **(2.91)**.

5.5.2.13 Expectation of Empathy

Table 5.56 Empathy Expectation

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
Excellent institutions of higher education must have convenient business hours of all students	0	0	100	4.71	0.45
Excellent institutions of higher education must have employees and teachers who provide individual attention to each student	2.0	7.0	91.1	4.36	0.70
Excellent institutions of higher education must understand the specific needs of every student.	3.6	0	96.4	4.53	0.74
Employee and teachers at excellent institutions of higher education must be focused on the best service for their students	0	0.3	99.6	4.80	0.41
The overall of Empathy (Expectation)				***4.60***	***0.33***

Table (6. 56) includes four statements that were grouped to examine the expectation of Empathy **(E)** of the respondents regarding "Empathy factor". It reports the means of respondents in the sample regarding this matter.

Table (6.54) shows that overall score mean of the Empathy factor is **(4.60) with standard deviation of (0.33).** The statement No 4 *" Employee and teachers at excellent institutions of higher education must be focused on the best service for their students"* had the highest rank with score mean **(4.80)** which **(99.6%) of** the respondents agreed with this statement.

5.5.2.14 Perception of Empathy

Table (5.57) includes four statements that were grouped to examine the expectation of Empathy **(P)** of the respondents regarding "Empathy factor". It reports the means of respondents in the sample regarding this matter.

Table 5.57 Empathy Perception

Statement	Disagree 1&2 %	not sure %	Agree 4&5 %	Mean	S.D
El-Fath University have convenient business hours of all students	82.4	6.6	11	1.90	0.98
El-Fath University have employees and teachers who provide individual attention to each student	80.4	10.3	9.3	2.1	0.882
El-Fath University understands the specific needs of every student.	96.7	2.6	0.7	1.59	0.51
Employee and teachers at El-Fath University focus on the best service for their students	96.7	3.3	0	1.5	0.49
The overall of Empathy (Expectation)				***1.77***	***0.46***

Table (5.55) shows that overall mean score of Empathy expectation is **(1.91)**. The statement No 3 and 4*" Employee and teachers at El-Fath University focuses on the best service for their students"* had the highest rank of disagreement **(96.7%)** with score mean **(1.5)** and **(0.5)** standard deviation.

5.5.2.15 Gap of Empathy

Table 5.58 Empathy Gap

Factor	Expectation Mean	Perception Mean	Gap
Empathy	**4.71**	**2.15**	**2.56**

Figure (5.20) illustrates the gap between the Expectation of and the Perception of Empathy.

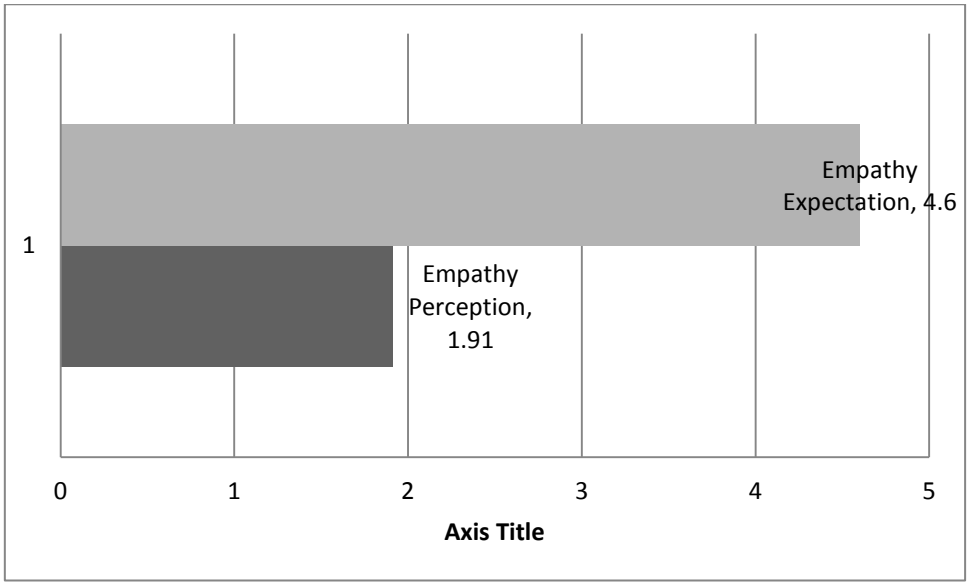

Figure 5.21 Gap of Empathy

Figure (5.21) shows that there was a gap between the total average score of the Empathy (Expectation) **(4.6)** and the total average score of perception of this category **(1.91)**.

5.5.2.16 Service Quality at the Second Case Study (FU)

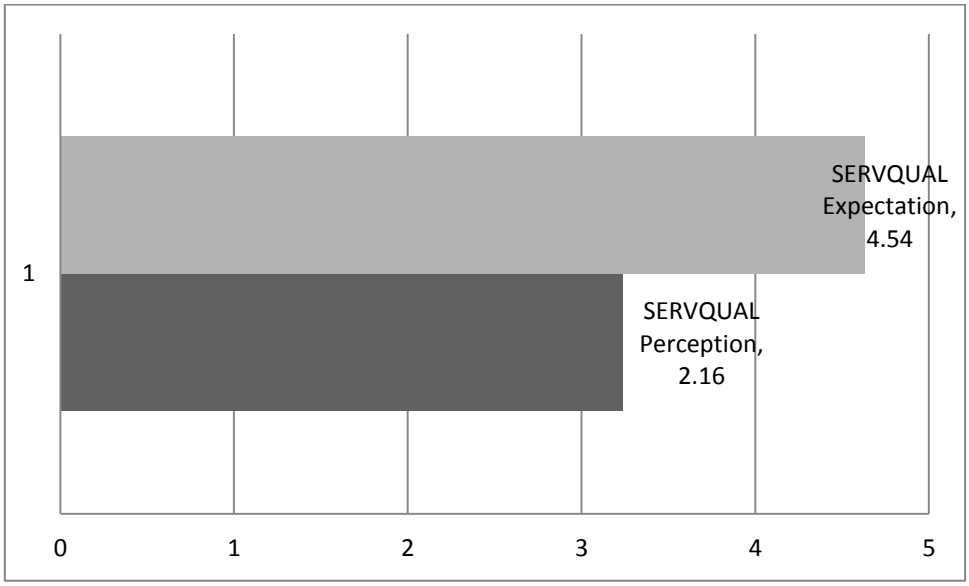

Figure 5.22 Service Quality at the Second Case Study (FU)

The Figure (5.22) shows that the Service quality expectation was **(4.54)** while the Service quality perception was **(2.16)** at the second case study (FU).

5.6 Comparison between the Service Quality at the Both Case Studies

Table5.60 Comparison between the Service Quality

Case study	Expectation	Perception	Gap
AGS	**4.51**	**3.39**	**1.11**
FU	**4.54**	**2.16**	**2.38**

The Table (6.60) shows that the gap (G) between the expectation (E) and the Perception (P) of the both case studies. It can be notices that the gap at the first case study **(1.1)** is less than at the second case study **(1.39)**. This means that the student at the (AGS) is more satisfy regarding the services that been provided to them.

5.7 Summery

This chapter has introduced data preparation and exploration then there was a descriptive analysis for the demographic characteristics of respondents, using simple statistics such as percentages; a descriptive analysis by utilizing means and standard deviation. Validity and reliability tests have been conducted to make sure that the instrument is able to

achieve the research objectives and answer the research questions. On the whole, the results indicate that the questionnaire has a satisfactory level of validity and reliability.

Moreover, this chapter has presented the finding form the both case studies in terms of Quality Culture assessment through the CSFs including: Leadership, Training & Education, Continues Improvement, Student & stakeholders, Employee's Involvement, Organisational Structure, Financial Condition and Academic Condition. In addition, the findings of the students' satisfaction assessment have been presented in the both case studies using the SERVQUAL instrument.

The next chapter concludes the thesis by offering overall discussion of the quantitative and qualitative data from the case studies and conclusions and some recommendations for future research.

Chapter Six: Discussion of Overall Quantitative and Qualitative Data from the Both Case Studies

6.1 Introduction

This chapter discusses the findings of this research and their implications, associated with a comparison to what has been written in the literature review. It aims to discuss the findings and results that have emerged from the data presented in chapter six.

Obviously, this discussion focuses on the main aim and the related objectives of this research, which were determined in section (1.4.1). Also, the discussion bases on the theoretical framework which was developed from the literature review. Such a framework has enabled the researcher to conduct the questionnaire and in-depth semi-structured interviews with the targeted respondents in both case studies.

Moreover, this chapter presents interpretation, triangulation and reflection of the quantitative and qualitative results. Furthermore, comparative and related studies have been introduced, especially those that have been conducted in developing countries, particularly in Libya.

6.2 Characteristics of the respondents:

This section aims to discuss the representation of the sample to the entire population

6.2.1 Age, Gender, Educational background and experience of the respondents

In the first case study (AGS) , The study showed that the majority of the respondents were more than 43 years. That is due the fact that the (AGS) appointed their faculty staff who holding at least the master degree.Young people in Libya complete their study aged between 22 and 25, however, the students who award their bachelor degree from the universities, prefer to work to be able to pay their fees or to be sponsred by their employers for their higher study. Thus, usally the people who holds master or PhD are at the middle age group (36-45).

While the minority are between 22 and 28 years which means that only few of the respondentes have the apportunity to have master or PhD degrees in this age group.

For the same reason, in the case study (FU), the majority of the respondents are more than 43 years, while the minority are between 22and 28 old.

Observing the participants' gender, the study shows that the majority of the respondents at the both case studies are male . The decline of the famale presentage is due to the culture influence. Many studies (UN report, 2012, UNDP, 2011, El-badre, 2007) have been undertaken in Libyan would obviously find that the percentage of men in the workforce usually records double or more than that of females which matchs the findings of this study.

Moreover, Arabic culture depends on the males in the social structure as financial suppliers to the household, while, in the Arabic social structure, the females still carry out the child-caring and housekeeping responsibilities. Also, women tend to accept more traditional secretarial jobs and work, for example, in the health or education sectors, probably due to having less contact with men and this being consistent with the Islamic culture.

Regarding this issue, Assaad, *et al.,* (2007) state "*the main factors affecting employment of women are related to cultural norms. The structure of the labour market and the economic environment are not welcoming for women to enjoy job opportunities, and these women face employer discrimination particularly if they are married, which highlights one of the biggest limits to their participation. Benefits to married women like maternity leave and child care are considered costly and thus reduce their chances of being accepted for a job".*

Pointing out the respondents' educational background, this study showed the majority of the faculty staff at the first case study (AGS) is holding PhD degree, while the majority with Msc degree.

6.3 Quality Culture

Total Quality Management programs are more likely to succeed if the prevailing organisational culture is compatible with the values and basic assumptions proposed by the TQM discipline. Only with the proper organisational culture and environment, can TQM initiatives be successfully implemented (Mohamed, et al., 2008).

As mentioned earlier eight critical success factors were utilized to assessment the quality culture at the case studies. The aim of this part of the discussion is to illustrate and evaluate the findings which emerged from the empirical study that reflect the implementation of these factors.

6.3.1 Leadership

Top management commitment has been identified as one of the major determinants of successful quality management programmes. This is highly supported by many studies as mentioned in section (3.2.1.1).

Table (5.11) shows that the overall score mean of this factor is **2.90** on the five-point likert scale, which is under the average (3) (1+2+3+4+5/5=3).
This indicates a low level of this factor which was a result of the low level of its components. It can be noticed that the top management of the (AGS) doesn't provide the guidance, means, and encouragement for the workers to follow for success or to set up a system that supports the others to develop their awareness of the concept of TQM. This means that there is a lack of top management commitment to quality initiatives in the case study.

A participant in the interview claimed that the lack of clear responsibilities formed a barrier to implementing TQM, and he added that the committee of academy (top management) does not pay attention to the role of top management in adopting TQM. Another one added that "*top management is unlikely to simply sign up to a corporate "vision" imposed from the top without real opportunities for debate and negotiation*. *This needs for leadership support, recognition and commitment to quality culture"*.
In addition, It can be noticed that the top management at the case study does not considered any appropriate process management approach or any improvement tools to develop the employees awareness of the concept of Total Quality Management.
The lack of top management commitment to quality management has negative consequences such as lack of employees' involvement, lack of incentives and motivations, inadequate resources employee resistance to change, inadequate performance evaluation, lack of customer care and a lack of continuous improvement

One of the interviews stressed "*The top management introduces programs but they do not participate in the program initiated, either by using excuses because of their other engagements or due to self-confidence*"

Respondents also believe that there is a lack of appropriate reward and recognition for outstanding performance, the case study is not linked with achieving quality goals, employees feel unsuitably rewarded for their contribution in general and there is a lack of formal systems to encourage and reward the employees Moreover, it could be seen from the responses that the management in general are not encouraging rewarding or even evaluating the employees' suggestions in quality matters. One of the interviewees said "*To be honest, there is a lack of reward and recognition system in the Academia, and if it is been found, it based mainly on the personal relationship*"

The second case study (FU) which selected from the public sector is not much different. It is suffering from the lack top management commitment as well. Table (6.20) showed that the score mean of the leadership factor was **(2.31)** on the five-point likert scale. This indicates a low level of leadership activities and this due to low level of all the component of this element. All the statements were below the score average mean (3).

The statement (5) which investigates the award and recognition system had the lowest mean score where the majority of the respondents disagreed with this statement. One of the interviewees stressed *"no constant reward and recognition system exists, and when it exists, the system as such is badly organised, there are no firm criteria for reward, and hence it is not fair. Consequently, reward is occasional rather than regular".*

And an interesting point was that some interviewees highlighted that warnings and blame were much more frequent than reward.
Moreover, one of the interviewees pointed out that the management does not listen to the complaints and suggestions from parents and students and does not try to solve

problems which are brought to their attention. There is complaining boxes in the university but no attention paid to investigate these complains.

The research revealed that there is a Government intervention to the public universities which has a negative impact and limits the university effort to change its policy to adopt quality management. For example, interviews revealed that due to such intervention students' performance regulations are suspended.This is in line with Alfnish *et al* (1998) and Al-Teer (2006) who indicated those intervention impact educational programmes and university's regulations. This leads to accumulation of students in faculties and departments, eventually affecting the educational processes, education provision, learning processes, and other resource provision.

In general, there is a lack of top management commitment to quality management at the case study. This was proved by the interviews, for example one of the interviewees said "*we are agreed that commitment to the TQM approach and its adoption in the case study environment is the top management's decision, however we do not see any sign of attention regarding this issue*"
In the light of the above discussion, it can be noticed that the both case study suffer from lack of top management commitment to TQM, and not keen to be involved in adopting TQM due to lack of education, skills and sometimes the appropriate resources either human or financial.

Theses finding consist with many studies that conducted in the Arabic region in general and in Libyan context in particular including: (El-hawat, 2006; Ambarek, 2010; Ma Daw 2008; Ben Jaber, 2010; Abdel-Nour, 2009 and Al-Khalifa, 2001) they concluded that there is a lack of top management to Q initiatives in most of the Arabic universities including Libya.

On the other hand, this study is different from studies conducted by Curry et al., (2002) and Baidoun (2004) in Saudi Arabia and Palestine respectively. They found that the top management was committed and supportive of quality management efforts.

Although there is a lack of top management commitment to TQM, It is worth to mention here that such results might not represent a true picture. The reality maybe is worse because some respondents are members of the top management team and therefore evaluated their colleagues higher than the real situation. Another reason is related to the culture and the nature of the people in the Arab World, who usually do not like to directly criticise their superiors.

6.3.2 Training &Education

For adoption of comprehensive quality management strategies such as TQM, continuing education and training is one of the most vital issues, which there is a relationship between training of employees and TQM implementation (Haupt, 2004). In the academic context, the training programme focus on participation in conferences, and seminars both locally and abroad, tailored training courses and sabbatical leave for academic staff members.

Table (5.12) showed that the score mean of this factor is (2.54) on the five-likert scale in the first case study (AGS). It is below the average score (3).This indicates a low level of Training & Education factor.

The majority of the respondents agreed that the university provide training programmes, and certain amount of money is allocated in the university annual budget to spend on employees' training programmes conducted either inside or outside the country. Although there is a training budget, formal training plan does not exist, and the training programmes are not determined according to actual needs that have to be covered by these progrmmes.

As the same time, the training plan does not pay attention to empowering people to take responsibility for quality, which were (72.2%) of the respondents agree that the training programme does not focus on empowering people to take responsibility of quality.

This comes with line with the qualitative finding; one of the interviewees stated "*all the training programmes at the university neglect the role of empowerment because*

they believe that the university is not at the stage of adopting an employee's empowerment policy. Meanwhile, the university does not provide training programmes in the quality management elements such as: programmes, such as communication skills, effective meeting skills and leadership skills"

In addition, many of the respondents criticise the top management because training is not provided equally to all the staff and training output is not evaluated.
Moreover, it is clear from the responses that the people in the top level have a lack of time to attend any training programmes as one of the respondents as commented:
"*We are occupied in doing so many tasks that it becomes difficult for them to participate in the training courses*".

In the second case study (FU), table (6.21) showed the overall score average of this element which (**2.25)** out of five-point Likert scale. This indicates a low level of training & education factor which was a result of the low level of its components. All the statements of this factor were below the average score **(3)**.
The respondents agreed on the absence of a training plan for all employees of the university and the lack of attention to train and refine the skills of the employees, specially which is related to TQM skills such as : communication, customer services, leadership, quality tools…etc.

They also agreed on the absence of nomination staff to attend training courses according to the job within the university, which leads to multiple errors during the performance of their work. The sample also agreed that the training obtained by employee does not contribute to the development of performance.
In addition, the results show that the staff members were dissatisfied about the way of training programmes were not equally distributed to all staff members.
This is approved by the results on the interviews, for example one of the interviewees stated "*We believe in the importance of training programme to benefit our employees; during our preparation of the university's budget, we point out from the beginning the expected spending on training programmes that are allocated as investment expenditure and not within current expenditure"*

Another one stated "*Although the General people's committee for the higher education proves the training budget of the university, the top management is often spends this budget in other things. It looks at the training as unnecessary in this stage".*

Another interviewee point out that the top management practicing favouritism or bias among the employees, which the university does not provide a fair equal training opportunities for all the staff , and it is not based on the actual need of the University. As a result Research findings revealed that there is a general agreement in the both cases that there are no appropriate training programmes offered by the top management. This shortage is particularly in the quality programmes including: Communications skills, Customer services, Quality tools and techniques, leadership, teaching methods and assessing students' performance.

These findings are compatible with what was noted by many studies conducted by Said *et al.,* 2004, Ben Jaber, 2010 and Abdel-Nour, 2009). They emphasised that despite specialised scientific skills of teaching staff in Libyan universities, most of them are not educationally trained for the teaching process.

Moreover, this finding is in line with (El-Hawat, A. 2009) who stressed that no regular training programmes exist in the LHEs especially in terms of quality issues. Also, these findings consist with (Masri., 2011) who has find that the quality of Arab HEIs has not kept pace with the international standards, the lack of training and education in these institutions is one of the main reasons.

6.3.3 Continues Improvement

For continuous improvement to take place, the awareness among different levels regarding the importance of continuous improvement process mentioned above need to be translated into actions. This could be achieved through providing more understanding of quality initiatives among those levels by establishing training programmes, visiting excellent peers, and inviting expert people

In this study, Table (5.13) shows that the overall mean of this factor in (AGS) was **(2.57),** it is low compared with the ideal score mean **(5)**, and under the average score **(3)** as well. This indicates a low level of continues improvement factor in quality practice in the first case study.

The results confirms that although the top management of case study is aware that small improvements are necessary to reach the TQM, no action is taken to identify root causes of problems, and developing suitable solutions.

However, the existence of top management awareness and at the same time the absence of a clear approach for continuous improvement in the case study indicated that there is a lack of real commitment to quality. Real commitment could be realised e.g. through working towards embracing the notion of continuous improvement throughout continuous assessment of different processes associated with the assessment of stakeholders' needs.

However, the top management of the case study does not adopt any quality problems solving methods (such as: quality improvement team, quality circles, self assessment …et.) .

The findings from the interviews support these results. For example, one of the interviewees asserted "*"the case study does not pay any attention or support to the ideas for quality improving, and the top management tries to solve the problems when occur".*

Moreover, the qualitative results show that the management of the case study deals with daily events and facing problems in a random way without a clear approach or plan for continues improvement. One of the interviews said "*the policy in place does not focus on analysing the problems and investigate and understand the cause of such problems in order to eliminate these problems in the future. The top management does not know that quality is never-ending task and commitment to that is required from the top management* ".

The second case study (FU) is not much different. Table (6.22) shows that score mean of this factor was **(2.47)** out of **(5).** Again it was below the ideal score, as well as, below the average score **(3)**. It means that the factor of continues improvement in (FU) practicing is low due the low average of the all components.

The research findings demonstrate that the attempt of the case study of continuous improvement is focused on limited aspects of their provided processes.There is no evidence from the case study that they attempted to adopt any kind of self-assessment, quality tools or measurement approach to improving their provided processes.

This indicates that such attempts of continuous improvement carried by top management are ineffective and at best suboptimal as they are not based on results of a self-assessment approach and they do not take in consideration aspects of other provided processes for realising comprehensive improvement.
One of the interviewees stressed *"the top management focuses only on the problems when it happens without adopting preventing policy, Fire-fighting approach to solve problem seems to be a formula for continuous improvement*".

The employees can make important contributions in continuous improvement efforts when they have the necessary power and skills. Also, managers can only participate in continuous improvement process if they have been well trained in the use of quality control tools and they are motivated and empowered.

In this subject One of the interviewees point out that the management of case study does not aware that the quest for quality is a never-ending process in which people are continuously working to improve the performance.

Moreover, Top management does not realise that the Continuous improvement means that small, incremental improvement that occurs on a regular basis will eventually add

up to vast improvement in quality. This leads to reactive behaviour "*It's not my problem"* attitude.

Moreover, benchmarking plays a vital role in continues improvement, since this entails the institutions monitoring their performance against that of best-of-class institutions, determining how they achieve those performance levels, and adapting their techniques and approaches. The information is used as the basis for improving administrative as well as learning and teaching processes. However, the findings of this research revealed that the benchmarking approach is completely absent in the both case study organisations. A result which confirms what has been reported by Porter and Yergin (2006) in their study on Libyan's competitiveness and which included the education sector as a contributor. They mentioned that, the Libyan institutions' facilities and teaching methods are not benchmarked against those of other countries.

These findings, also, consist with the UNDP (2006) findings which pint out that the Arabic universities do not use any continues improvement tools such as: benchmarking or Plan-Do-Chek-Act (PDCA) cycle.

In addition, it agrees with finding of Sayah (2006) in his study on Libyan managers, who have reported that in Libyan culture tasks are carried out in ad-hoc method with day-to-day business management in a fire fighting approach.

6.3.4 Students & Stockholders

Brendan (2010) believes that customer feedback is critical in guiding organisations on the right path in developing products and improving services. An effective way of gathering customer feedback is by survey. In modern times, customers are increasingly interested in voicing their concerns and opinions. Companies capture feedback from customer surveys to identify performance aspects impacting the level of customer satisfaction so appropriate improvement action can be taken.

Table (5.14) showed that the overall mean of this element is **(2.77)** in the (AGS) which is below the average **(3).** It indicates a low average of this element due the lack of understanding and practicing in the case study.

However, the majority of the respondents agreed that the case study is somewhat aware of the important of monitoring the special needs and expectations of current students. For example one of the interviews indicated that opening new departments is one fact of focusing on students and stockholders. Other interviewees stressed **"***The case study was established in 1996 as institution focusing only on the economic studies, and then it has expanded to comprise about 9 schools at present. I strongly believe that is as a result to the stockholders desire including: labour market, government, students,...et* ".

Yet, there is an agreement among the respondents that the university does not communicate actively with students, community group and other sectors to make them aware of the mission and policy of the university.

Moreover, findings revealed that the case study does not conduct students' survey in order to understand their needs and their concerns. According to one of the interviewees, this is due to two reasons; students do not answer the questions properly and fear to express their real opinion. Another one states that the survey's outcomes were considered by some leaders as embarrassment. Also, such outcomes were understood as criticism and it was found difficult to be accepted by most academic staff.

Based on the finding, it can be noticed that the top management of the case study pays no attention to the students or to the other stockholders regarding their opinion or suggestions. Also, there is no specific mechanism in the case study for listening to the stockholders, as one of the interviewees stressed *"the Faculty is not in close communication with potential employers, to establish what skills and knowledge they need from graduates".*

The absence of competitions either locally or internationally has further hindered the growth of customer- based cultures in the case study.

In the second case study (FU), Table **(6.23)** show that the overall score mean was **(2.07)** out of **(5)**. It is under the average score **(3)**, which is due the low practicing of the all components of this element. For example, **(88.6%)** of the respondents agreed that the university has not any system or mechanisms for maintaining effective stakeholder relationships.

Although the top management believes that studying and investigating the labour market' needs are important and would help the university to improve and link its activities in more consistent way with the society, there is no action taken to listen to the customer voice. One of the interviewees stated*" there has been no approach or method adopted by the top management of the case study towards listening to the views and identify the needs of their stakeholders including employers of their graduates "*.

In this respect at (FU), there is no much different from the first case study. One of the interviewees point out that the students' survey was distributed only once, and he stated:

"The result of such survey were found embarrassment, to be honest, it was found difficult to face the related people (top management or faculty members) with such result. It is because of our culture where criticism is not accepted in this level".

Although TQM is a customer-based vision of university management to increase the value of services offered to customers, and Universities should collect and review customer data regarding satisfaction on services, the both case have not system in place for developing a customer-focused strategy of improving services and meeting customer needs to help the universities achieve high quality.

This study revealed that there is no effective and efficient connection between labour market (as one of the stockholders) and the case study to avoid the situation which

occurs relatively often in the labour market (having many highly educated people with limit job opportunity).

It is worth to say, TQM experts are emphasising that it will be difficult if not impossible to meet and exceed the expectations of the external customers if attention is not paid to internal customers. For example, *Dahlgaard et al.,* (2007) said "*before you can satisfy external customers, however, you must first eliminate some of the obstacles to the internal customers (i. e. the employees) and create the conditions necessary for them to produce and deliver quality.* However, this type of culture is absent, for example one of the interviewees said

"*I had never felt that I'm part of the company; I have no any feeling towards this university, I'm here just because I cannot get a better chance near where I live*."

In the light of the above, these findings are consistent with (Issa, et al. 2012, Ben Jaaber , 2010 and Abdel-Nour, 2009) . They point out that there is a poor level of harmony between the institutions of higher education in Arabic countries including Libya and development needs and the labour market, at the quantitative and qualitative level.

In addition, these results are in line with many studies and reporters conducted in the region (Masri S., 2011, El-Hawat A., 2007, Arab Human Development Report, 2009, UNESCO report, 2010).

Thus, top management at the levels of faculties and departments should establish and cultivate a culture of trust for students' feedback to be honest and helpful. The start point of such, could to spread the necessary knowledge and understanding among students, faculty members and support staff about the importance of student survey and its role towards improving the quality of educational processes and to satisfy their students desires.

Likewise, senior leaders, faculty members and support staff should be convinced that the students' survey is part of the Continuous Quality Improvement process.

6.3.5 Employee' Involvement

A key component for the achievement of an organisational transformation is to allow employees to get comfortable with change. So, for quality management to be effective, it necessitates the full participation of all employees.

Zhang *et al.,* (2000) and Tari, (2005) found that there is a strong correlation between the adoption of employee involvement and TQM.

In the first case study (AGS), Table (5.15) show that the overall score mean of this element is **(3.06)** out of **(5).** The majority of the respondents agreed that the university does not pay any attention to encourage the employee to take actions and make decision on their own which all decisions are centerlised.

Looking back to the finding in Table (5.15), many respondents argued that the management does not pay attention to the suggestions made by neither administrators nor the academic staff members. Moreover, this is an agreement among the respondents that top management does not delegate even minor tasks to their employees. Almost all decisions must be approved by top management; and all respondents confirmed that any issues with a financial commitment require top management approval. It would be after some delay (caused by the bureaucracy), and many other interviewees agreed that any suggestions requiring a financial commitment would not even be considered.

This means that the case study does not give consideration to the employee empowerment in delegation of decision making authority and involvement in decision making process.

Managers, supervisors and employees have to follow instructions, and do whatever they are asked to do according to their job position and responsibilities. It is clear that top management does not motivate and empower their employees to participate in any sort of change affecting their university, or suggest any improvement.

Moreover, this is in line with the interviews outcome. The interviews revealed that the employees are not sufficiently involved in the quality's daily activities, and the employees' involvement is not being given appropriate attention. One of the interviewees stated: "*the top management of the case study never communicated their vision to the whole organisation and they do not put a serious effort into creating a supportive work environment for employees*".

Thus, it could be seen employees were not empowered to accept responsibility for quality and were not kept informed of anything that concerns their university and their work. Furthermore, it was seen in the results that employees were not encouraged to give suggestions, were not involved in decision-making and in day -to-day activities, not encouraged to inspect the quality of their services and fix any quality problems and not empowered to implement quality improvements efforts.

In the second case study (FU), table (5.24) shows that overall score mean of this element is **(2.38)** out of **(5)**. This indicates a low level of this factor which was a result of the low of the all components and all the statements are below the average (3).
The majority of the respondents agreed that people in the university do not participate in problem-solving activities affecting their work due the lack of top management support.

There is an agreement among the respondents that the top management does not trust the capability of the staff in the other levels, so it does not push decision making to the low level in order to encourage the employees involving in decision making.
Similarly, same results were found from the interview, For instance, one of the interviewees stated**: "***Top management does not participate in the quality management activities. They never have the ability to communicate the vision of the university to all levels**, it does not have trust the abilities of the others".*
Top management might feel threatened by the idea of delegating authority and empowering employees as there is a lack of employee-management trust. Another possible reason that leads to the failure of employee involvement is the negative and passive attitude of employees towards responsibility in the Libyan culture.

So it can be noticed that there has been a lack of employee participation and involvement in the both case studies.

Literature increasingly shows that employee involvement is essential to achieve quality and productivity improvement. Successful employees' involvement requires that leaders/managers initiate and maintain the process of involvement and provide access to resources that people need in order to contribute. It is only when involvement is practiced effectively that human commitment and creativity will fuel process improvement. Having an open work environment where employees can share their suggestions and ideas is a critical factor leading to organizational success.

6.3.6 Organisational Structure

Table (5.16) illustrated the analysis of the element of Structure & System in the first case study (AGS). It shows that the overall score mean of this element is **(3.13)** out of **(5).** Although the score mean of this element is more than the average score (3), it is below the ideal score mean (5).

The top management is aware of the importance of exchanging information with the staff, and different departments with each other. The majority (83.5%) of the respondents agreed with this statement. However, There is no effective communication system within the university to ensure the flow of information and data vertically (from top to bottom and vice versa), as well as horizontally between the department in order to achieve the objectives of the university.

All the respondents agreed that there is no electronic communication whatsoever and that all communication between departments and between the management and staff occurs through the traditional channel including: meetings, letters, memos, newsletters and regular meetings of the academic staff union. Many interviewees described the communication process as very complicated and suffering from bottle necks in many places. Also, there is an agreement among the respondents that there is a very high degree of centralization of the decision making process.

One of the interviewees stressed "*We are suffering from a hierarchical structure in which the communication flow is vertical (top-down). And due the poor communication system there is a clear definition and concept of the list of tasks to be carried out by the all staff".*

Another interviewee said *"Academic departments are not allowed to develop any contacts or engage in collaboration with any academic or research institution without permission from the top management*".

One of the interviewees points out that the top management does not share their accumulated experiences and knowledge with their employees. They want them to be dependent on their instruction.
Another of the interviewees said *"Because employees are afraid of the consequences of telling the truth, they commonly tell bosses what they think the bosses want to hear. The top managers thus can become not aware about what's happening"*.

The situation in the second case study (FU) is not much different, table (6.25) shows that the overall score mean of this element is **(2.20)** out of **(5).** It is under the average score **(3)**, which is due the low practicing of the all components of this element.
For example, the majority of the respondents agree that there is no effective communication system within the university to ensure the flow of information and data vertically in order to achieve the objectives of the university.

One of the interviewees said ""*Regarding the absence of effective communication in the case study staff members feel isolation, and in many times they do not know what is going on in their university* ".

They agreed that the case study tend to be managed by gut feeling; most of their decisions are based on opinions rather than on any well-defined approach or on the analysis of collected data. As one interviewee stated:*"Most of the university's decisions don't last for long, they contradict each other, all decisions are made*

behind doors, without staff knowing, they don't consult them, they do not use data to make decisions. " .

Moreover, another one blames the faculty members themselves saying "*most academic staff is not attending such meetings, because they are engaged in external jobs e.g. consultancy or as part time lecturers in other HEIs in order to increase their income. Hence, the majority of them do not care and do not attend the meeting even they been invited*".

Based on the quantitative and qualitative in the both case studies, it was evident among all respondents that there is no electronic communication, no emails among staff members, and no internet. Key management decisions are communicated to heads of departments during the meetings of the Faculty People's Committee, which then provide the opportunity for the heads of department to communicate the management major decisions to all departmental staff.

In addition, Administration bureaucracy is considered as an important factor that affects most aspects of quality improvement process and services provided by the university including those of the two embedded cases. Additionally, the research revealed that Libyan universities' leadership encountered changeability and unsettledness in general. Also, it is revealed that the university administration is strongly influenced by the Libyan culture either social or/and political, therefore, the decisions taken by such administration are affected.

One of the interviewees stressed that bureaucracy is the most important obstacle to implement any quality programmes , he said:

"I think Bureaucracy is No 1 barrier. It makes people frustrated and it causes a lot of delays and waste of time. Suggestion it should take one week, it takes one month to get the feedback how we can talk about improvement or suggestion system in such environment ".

This results agree with findings of (Sarvan *et al.,* 2005) , they have reported that this type of structure forms a series of barriers to the implementation of collaborative

efforts across departments. In order to facilitate the flow of information and establish effective communication, barriers between functional areas should be eliminated (Deming, 1986).

Moreover, these findings are also consistent with a study on the reason behind the slow implementation of TQM initiatives in Libya which was carried out in the eastern part of Libya in the city of Benghazi. The study has revealed that Libyan organisations' failure in implementing quality programs and difficulties in the journey of transformation towards excellence can be related to many factors and one of them is the Bureaucracy management approach (Egnaibor, et al, 2002).
It is also in line with studies conduct by (Ben jabber, 2010; Abdel-Nour, 2009) they concluded they the Libyan universities are suffering from lack of communication and Administration bureaucracy.

6.3.7 Financial Condition

In the first case study (AGS), table (5.17) shows that average score of the nine statements is **(3.53)** out of **(5).** This means that the financial condition at the case study had the highest average score among all the elements of the quality culture.
The majority of the respondents agreed that the case study allocates adequate financial resources for providing up-to-date references, as well as subscribing in the International scientific journals.
Moreover, the majority of the respondents agreed that Financial resources available to the (AGS) are considered to be sufficient compared to the number of students enrolled. This is because that the study in this (AGS) is not free, every student pays about (500 L.D) (£300) for every semester, and (1000LD) (£600) if he/she sponsored by company. In addition, the human resource institute in the university runs some training courses for the public and private organisation which is considered as one of the main financial resources of the case study.

Also, the case study has received some sort of financial support from the government. Therefore, the case study is in a good condition in terms of the financial resources, especially if compared with the Libyan public universities.

One of the interviews stated "*In 2007 the modern central library was opened, all the contents of the old library were transferred. The new library includes a large number of books, references and dictionaries in various disciplines. The library so far including one hundred and twenty thousand copies of Arabic books, seventy-five thousand of English books, large number of Master and PhD thesis from outside and inside the Academy, and a large number of Arabic and foreign journals and seminars*".

However, despite the financial resources of the case study is sufficient, there is no remarkable effort been done to spend some to improve the quality and to encourage those who engaged in such business.

One of the interviewees said **"***the financial available to the university is very good, it comes from tuitions fees, training institute, language center, and state support. However, the University does not make a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality. The top management pays a lot of money in not important things such as: purchases of new cars for the staff, renewal the offices furniture and laptops...etc".*

It is clear that the (AGS) does not suffer from lack of money; it suffers from the abuse of this money. The top management sees the money that may spend in quality improvement is not necessary, and they consider the rapid and steady increase in the number of registered students is an indicator to the good quality in the university.

On the other hand, table (6.26) showed that the score mean of the financial element in the second case study (FU) is (1.99) which is very low. The majority of the respondents (88.6%) agreed that the university has not autonomy or independences in terms of financial issues.

The university is financed, and under the authority, of the state. Each public university manages its own budget and administration. However, despite a comparatively large

allocation of the national budget, the university has been under finical pressure as a result of the rapid increase in demand, and because of the external economic pressure. One of the interviewees stated: "*the availability of the financial resources is the main challenges that avoids any developing programmes*".

The financial budget which approved by the ministry of HE does not provided to the university in time, sometimes takes more than six months to be available. One of the faculty staff stated "*in the absence of independent budget for laboratories, many experiments could be cancelled or delayed due to the bureaucracy of administrational procedures. This will affect the quality of practical educational programmes*".

Another interviewee point out *"administrators did not utilise those resources effectively and efficiently, in my opinion most of senior leaders either at the level of faculty or/and department concentrate on secondary matters rather than the essential ones. For example, they concern about new cars or laptops instead of modernise libraries or improve scientific research."*

These findings revealed the shortage in finical resources could have a negative impact on the infrastructure and in turn could affect the staff commitment towards providing a good quality job. For example, involving the use of technology in teaching and learning, Internet access, information system, good library, entertainment facilities and accommodation would motivate staff and students.

Thus, providing enough necessary resources would facilitate many processes, including educational and administrational processes where services and activities could efficiently carried out. In this context, many quality authors (Freed *et al.*, 1997, Seymour, 1992) mentioned that lack of adequate resources include necessary financial resources make it difficult to get the movement off the ground and continuously support quality enhancement efforts. They added that lack of sufficient resources are constraints that make it difficult to deliver the service as expected.

In the absence of necessary budgets, staff members have to do more with fewer resources. This might go beyond that where practical experiments could be delayed or cancelled as mentioned by one of the interviewees because a request for necessary electronic components or instruments essential for experiments is a long process.

Likewise, one interviewees point out that the top management in the faculty suggests some plans to improve academic activities provided by the department. So, it was found that such suggestions collide with the lack of independent budget and bureaucracy.

Respondents at all levels especially in (FU), mentioned that there is a deficiency in the university's infrastructure in general (buildings, labs, libraries, workshops, and facilities for people who need special needs).

This finding supports many Libyan authors for example, Alfnish *et al* (1998), Al-Teer (2006), and Abodeeb (2006) who stated that the Libyan HEIs are encountering poor infrastructure and facilities. It is clear that the lack of infrastructure and required facilities needed by educational processes are barriers towards provide good level of quality in Libyan HEIs. They added that Libyan HE has witnessed rapid increases in number of students; this increase is beyond the capacity of the HEIs.

Also, These finding are in line with (Al-Rashdan, 2012) who concluded that the budgets allocated for education in Arabic universities remain limited and insufficient to meet the growing needs of higher educational institutions. Some countries have reduced education expenditures, forcing universities to increase tuition and fees in order to balance their budgets.

6.3.8 Academic Conditions

It can be noticed from the Table (5.18) that the overall score mean of this element in the (AGS) is **(2.86)** out of **(5).** This indicates a low level of academic practice at the case study.

The majority (73.3%) of the respondents agreed that the number of faculty members of the university is considered sufficient to the number of students. This is due to the fact that the qualified people prefer to work with the case study (full or part time) for many reasons including:

- ✓ High salary which is higher than the public ones,

- ✓ The possibility to get a car and participating in conferences abroad …etc.
- ✓ The possibility of publishing their books (if there is) for free in the case study.
- ✓ The reputation of the case study.

Moreover, there is an agreement among the respondents that filling vacancies does not done through the appropriate procedures. One of the interviewee points out that the top management does not respect the recruiting standards and these standards are not applied to everybody. He commented that although there are standards and criteria for recruiting academic staff, these standards are abused by the top management, He said:

"The recruiting standards are abused by people, for instant, when new academic staffs applies, the school committee will make the decision, but in the meeting sometimes people put high grades on some criteria which is not crucial and neglect the important issues, and this makes the selection decision wrong."

Another one of the interviewee stressed that there are regulations for the academic staff recruitment but that some high officials intervene and disregard them. He added *"the person who has person effect (favaritism) has the more chance to be recruited by the university"*.

In terms of the cooperation between research centre in the university and other sectors the majority of the respondents agreed that there is no any kind of this cooperation.

Regarding the curriculum and the courses' syllabus, the majority of the respondents agreed that the case study does not review the curriculum and the syllabus periodically to meet the needs of the society and keeping pace with modern curriculum. One of the interviewees stressed *"due to the fact that the majority of academic staff in the case study are working as a part time lecturers or consultant in order to improve their come. This impacts their performance and makes them busy all the time, which in turn leads them to use the same curriculum and syllabus* ".

In the same context, respondents revealed that there has been no method to investigate the needs of the labour market to provide programmes and curriculum in consistent with the needs of employers.

In the second case study (FU), table (6.27) shows that the overall mean of Academic factor is **(2.12),** which is low compared with the ideal score mean **(5).** Moreover, all the score mean of the statements are below the average **(3)** due to the low score of all the components.

Respondents from the case study are agreed that there is no cooperation between research centre in the university and other sectors to meet the needs of the community. The lack of the cooperation and communication between the university and the other sectors makes the university operating in isolation from the society. One of the interviewees point out the all the university's researches remain in university without and benefit to the others.

Additionally, teacher's load in (FU) is typically large. Thus, professors find it difficult to pay attention and focus on research activity. However, some professors provide extra efforts for writing and publishing e.g. text books in order to increase their incomes.

This is consists with many studies including; (Al-Teer, 2006; Alfnish *et al*, 1998; Al-Badree, 2006), they concluded that the Libyan universities were not able to establish a scientific research tradition.

Hmad (2006) points out that most of research offered by Libyan universities is in a form of 'research exercise' i.e. dissertations introduced by students to obtain certificates. Likewise, research provided by academic staff to fulfil the requirements of academic and job promotion. Therefore, the goals of such research have not emerged from the real needs of the labour market.

On the subject of the curriculum and syllabus review, many academic interviewees contended that they do indeed review and develop their curricula periodically

according to the social and technological needs. However, this effort is not systematically organised by the university; it is according to the staff vision and experience.

In Addition, there is an agreement among the respondents that the Majority of curricula afforded by Libyan HEIs does not fulfil the needs of society and are unable to contribute in solving its problems. At the same time there is a lack of balance between the theoretical and practical parts of curriculum provided particularly by applied science faculties. One of the interviewees said" *The compilation and delivery of the required syllabus is subject to the teacher's beliefs who ultimately lack the enthusiasm and desire to renew and develop his knowledge. This creates major differences in the materials of same subject offered by peer departments".*

Regarding the recruitment in the (FU), the interviewees highlighted the complex system for recruiting the academic staff, where the recruitment in this respect begins at departmental councils and then progresses for approval by the Faculty's People's Committee and then approval by the university committee and must be sent to higher education ministry. However, some academic staff members are appointed by ministry without seeking the consent of concerned departmental councils. Another interviewee highlighted some problems in recruiting academic staff members. For instance, some applicants come from industry with no teaching skills; and some academic staff was also recruited according to their relationships with the administration (personal or social relationships).

One of the interviewees indicated that Heads of Departments are appointed according to the personal and social relationships with top management. And another one said *"some Heads of Departments abuse their power, and gain personal benefits and privileges. For instance, they organise outside business trips for themselves, and allocate themselves the status of membership of some committees with all the financial privileges and high ranking social standing that this entails".*

The finding from the both case studies are consistent with (El-Hawat, 2007) who concluded that the academic situation in the Arabic higher education has fallen short of meeting its social and economic goals.

It is also match the study of Daw, *et al.*, (2008) who concluded that Libyan curriculum reform is essential in attracting not only an increased number of students, but well-prepared ones who challenge the system, contribute to future development and may want to build their future careers in Libya after graduation.

Moreover, Research findings showed that there has been no approach or method adopted by both case studies to identify the needs of labour market and interpret these needs in the curriculum design. This is contrary to best practice recommended by Venkatraman (2007) and MBNQA (2004) who indicated that HEIs should determine the needs and expectation of their stakeholders through gathering information and necessary data.

Also, the findings are in line with the national report (2004) presented to the international conference on education by many Libyan committees of experts. They indicated that there is a lack of standards for choosing university teaching staff members. They concluded that the number of students enrolled in social and behavioral specializations has increased despite the accumulating number of their graduates who are searching for job.

Also, They are in consist with (El-badre, 2007) who stressed that there are indeed recruitment standards stipulated for the appointment of academic staff members, but that these standards are neither universally applied nor respected, as a result of the prevailing Libyan culture in which personal relationships are allowed to intervene in matters of recruitment and selection.

6.4. Comparisons between the Two Case Studies

The figure below (6.1) shows the differences between the average score of the two case studies, whereas the average score of the quality culture of the first case study (AGS) was (2.98), and the second case study (FU) was (2.21).

Although the quality culture of the both case studies was below the average score (3), the mean score of (AGS) is better than the score mean of the (FU) .

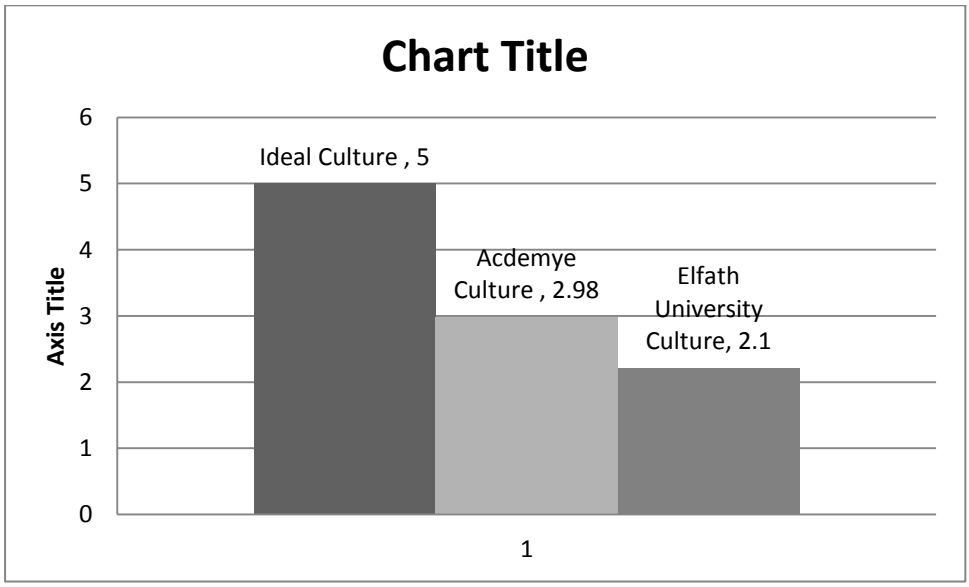

Figure 6.1 Comparisons between the Both Case Studies

The researcher believes that the differences are due to:

- ✓ **Academic Freedom**

Academic freedom is "*the right of scholars to pursue their research, to teach, and to publish without control or restraint from the institutions that employ them*" (*The Columbia Encyclopedia).* However, Academic freedom is not an absolute concept; it has limits and requires accountability. It recognises the right of academics to define their own areas of inquiry and to pursue the truth as they see it. Academic freedom can make a significant contribution to promoting the quality of both institutions and the system as a whole, but it needs to be understood and respected, both within institutions and by the bodies to which they are accountable.

Relatively, the academic members in the (AGS) have freedom; it could be seen in the working hours of staff and in the flexibility of time. The interviewees indicated that the freedom of academics could be exhibited in design of curricula so that they are able to determine course content, and that they have the freedom to add subjects, to choose the teaching style and the way of delivering the lectures, and to organise the communication with the students within the classroom.

- ✓ **Financial Stability**

Higher education needs satisfactory financial stability to permit orderly development. Financial uncertainty, sharp budgetary fluctuations, and political favouritism hinder good governance and make rational planning impossible. The importance of higher education as a public good must be matched by adequate public investment to enable institutions to discharge their public responsibilities.

The reality is that (AGS) does not suffering from financial shortage or delays, because it can utilize their resources without permission from any external body (like in the public ones). So the financial resources are sufficient to make any improvement, which is the main reason for having a good infrastructure and facilities.

- ✓ **Autonomy**

Nyborg (2003) stated *"To meet the needs of the world around it, its research and teaching must be morally and intellectually independent of all political authority and economic power."* . He added that any higher education institution calling itself a university should be an autonomous institution.

Moreover, Autonomy may be described as the overall ability of the institution to act by its own choices in pursuit of its mission. It is the net result of the sum of its legal rights and duties and its financial and other resources.

For example, European Universities Association (EUA) strongly believes that increasing institutional autonomy is a key to enabling universities to respond to these new demands (Estermann et al., 2009).

So the (AGS) is essentially free to determine their internal academic structures without government intervention. And it has the ability to decide on tuition fees, staff salaries and freely using its income.

Moreover, (AGS) is essentially free to recruit its own staff which the successful applicant is appointed appointed at the faculty level or alternatively by its-level

decision-making body. The final decision on the selection or appointment of the candidate is made at faculty level

In contrast, the (FU) is element in a system of state institutions, following general laws and regulations for state institutions. So the important decisions should be approved by the ministry of higher education.

- ✓ **Stability of Leadership**

The organizations need a stable and committed leadership that can support and understand the necessity to implement TQM, and develop quality vision, mission statement, and policy for all members of the organisation. Comparison between the two case studies (in terms of leadership stability) reveals that the (FU) faces main problems results from the change in leadership. It reflects on their commitment to TQM implementation. The top management at (AGS) has not been changed.

This stability allows the top management to set up goals and plans and it will keen to promote the institution and improve the quality of its services.

6.5 Quality Services

6.5.1 First Case Study

It can be noticed from the Table (5.28) that the expectation of the first dimension of (Tangibility) the SERVQUAL is very high (4.35)**.** It means that the students come to the university expecting high level of services**.** For example the majority of the respondents agree that Excellent higher education institutions must have modern equipment, such as laboratories" and The material associated with the service provided, such as journals, printed matter, must have a good visual appearance and is up to date".

6.5.2. Summary of Means of Customer' Expectations and Gap Scores

Table (6.1) shows the gap between the students' expectations and perceptions at the first case study (AGS).

Table 6.1 Service Quality Gap

Dimensions	**Statement**	**Expectation score**	**Perception score**	**Gap score**
Tangibility	TA1	4.86	4.26	-0.60
	TA2	3.37	3.39	0.02
	TA3	4.76	3.20	-1.51
	TA4	4.58	4.00	-0.58
Average				**-064**
Reliability	RE1	4.80	3.55	-1.25
	RE2	4.64	3.80	-0.84
	RE3	4.64	2.69	-1.95
Average				**-1.35**
Responsibility	RS1	4.74	3.65	-1.09
	RS2	4.64	2.07	-2.57
	RS3	4.72	3.77	-0.95
	RS4	4.72	3.91	-0.79
Average				**-1.36**
	SE1	4.06	2.62	-1.44
	SE2	3.59	4.17	0.58

Security	SE3	4.43	3.01	-1.42
	SE4	4.46	3.89	-0.57
Average				**-072**
Empathy	AM1	4.76	2.87	-1. 8
	AM2	4.34	3.16	-1.18
	AM3	4.47	3.39	-1.08
	AM4	4.79	3.98	-0.81
Average				**-1.14**
Overall Average - 1.062				

It is clear from the gap analysis that there is a significant difference between student expectations and their reality; with expectations being higher in all the statements expect one statement.

TA1, TA2, TA3 and TA4 refers to the Tangibility dimension which obtained an overall average gap of -0.64 the expectations of students in relation to this dimension are high in 1,3 and 4, only question 3 has a positive difference between perception and expectations (P-E); however this question refers to the appearance of employees. This different from other questions which refer to the physical installation and the university's equipment.

The resulting from the interviews support these results, for example one of the interviewees said *"to be honest, we don't care about the staff' appearance, but we care about the equipment and laboratories and things that impact our study*"

Another one stressed "*I moved from the public university and paid much money in order to get modern equipment and good services, but it is not as I expected*".

This result indicates that the (AGS) should invest in improving physical installations.

The reliability dimension is analysed in questions RE1, RE2 and RE3, which obtained an overall average gap of -1.35.

The difference between (P-E) for all questions is negative. It is one of the worst average among the five dimensions.

RE1 of the expectations questionnaire received the highest score in its evaluation, revealing that the students recognize this issue as essential for the quality of the service provided. Therefore, the institution must consider the possibility of investing in training and resources so the promised deadline can be met.

RS1, RS2, RS3 and RS4 of the questionnaire refer to the Responsibility dimension. The overall average gap is -1.36. The different between perceptions and expectations (P-E) for all questions is negative, revealing that there are considerable faults in the services, which are put at risk the quality of the service being offered.

Questions SE1, SE2, SE3 and SE4 of the questionnaire refer to the Security dimension, which obtained and overall average gap of -0.72. The difference between perceptions and expectations for all the questions is negative.

However, the SE4 which is related to the knowledge of the staff faculty needed to answer the students' questions has the lowest gap. It means that the students to some degree are satisfied to some degree with this issue. One of the students said: "*I am very satisfied with staff faculty knowledge since they are courteous, , skilful, and knowledgeable in their job"*

Finally, AM1, AM2, AM3 and AM4 of the questionnaire refer to the Empathy dimension, which obtained an average of -1.30. In this dimension the greatest concern is in understanding and meeting the student needs.

In the (AGS), there are remarkable problems in business hours for some important support services for the students (secretary, admission department, financial section, etc.).

One of the interviewees said *"the most important problem that we face is the availability of many department and sections which deal with students. As student I need to spend much time to get service that needs only minutes"*. Another one stressed *"the top management of the university should pay attention to the business hours, I think the university need more staff and working hours should be extended.*

As it can be seen from Table (7.1) and Figure (6.16), that the students' expectations in all dimensions of service quality were not met. Regarding the mean differences, it is clear that the highest gap were observed in Responsibility and Reliability with overall average score of (-1.36) and (-1.31) respectively. The lowest gap was observed in Tangibility with overall average score of (-064).

Having a negative gap shows the fact that universities must try to increase the quality of their services and be more sensitive and aware of the student' requests and questions and it seems that we cannot manage universities using the traditional approaches. So, in order to be successful, universities must seek to continuously improve processes and outputs to satisfy their students as customers, the task that requires management to adopt strategies that are comprehensive and more effective.

6.5.2 Second Case Study (FU)

Table (6.2) shows the gap between the students' expectations and perceptions at the second case study (FU).

Table 6.2 Quality Service Gap in the Second Case Study (FU)

Dimensions	Statement	Expectation score	Perception score	Gap score
Tangibility	TA1	4.61	1.7	-2.91
	TA2	4.09	2.7	-1.39
	TA3	4.77	1.48	-3.29
	TA4	4.74	1.91	-2.56
Average Tangibility				**-2.60**
Reliability	RE1	4.66	2.02	-2.64
	RE2	4.74	2.08	-2.66
	RE3	4.63	1.89	-2.74
Average Reliability				**-2.17**
Responsibility	RS1	4.76	1.93	-2.83
	RS2	4.56	1.76	-2.8
	RS3	4.71	2.54	-2.17
	RS4	4.79	2.39	-2.4
Average Responsibility				**-2.56**
Security	SE1	4.05	2.17	-1.88

	SE2	3.62	2.55	-1.07
	SE3	4.48	3.25	-1.23
	SE4	4.47	3.66	-0.81
Average Security		**-1.25**		
Empathy	AM1	4.71	1.90	-2.81
	AM2	4.36	2.1	-2.26
	AM3	4.53	1.59	-2.94
	AM4	4.80	1.5	-3.3
Average Empathy				**-2.56**
Overall Average -2.38				

It can be noticed from the gap analysis in the (FU) that there is a considerable difference between students' expectations and their reality, which expectations being higher in all statements.

TA1, TA2, TA3 and TA4 refer to the Tangibility dimension which obtained an overall average gap of -2.60. The expectations of students in relation to this dimension are high. The highest gap was observed in the question TA3 which is related to the visual appearance of the physical facilities. One of the students said " *to be honest, all the visual appearance of the equipment and facilities is not attractive, for example, when you inter to the printing room, you will note that printers are very old and the copy machines do not working and neglected".*
Another student said *"You know, at this time of the year, students feel bored because of the hot weather and as you can see the majority of the lectures halls are without air-conditions".*

RE1, RE2, and RE3 of the questionnaire refer to the Reliability dimension; the overall average gap is -2.67. The different between perceptions and expectations (P-E) for all questions is negative, revealing that there are considerable faults in the services. One of the students said *"the university management does not do its job right from the first time, many times makes mistakes even in the results of students or locations of the lectures or students' recorders".*

RS1, RS2, RS3 and RS4 refer to the Responsibility, which the overall average is (-2.55). All the differences between perceptions and expectations are negative.
The highest negative score was observed in RS1 (-02.83). This question relate to providing the services in certain time. One of the students said *"due to the increasing number of students in the faculty, the staff cannot do what they promise. Usually there is a delay in responding the needs of students"*.

SE1, SE2, SE3 and SE4 refer to the security dimension, which the overall average gap is (-1.25). It indicates that there is a gap between the perceptions and expectations in all the questions. This dimension which is related to knowledge and courtesy of employees and their ability to inspire trust and confidence is the best among the all dimensions which obtained the lowest gap. One of the students commented.

AM1, AM2, Am3 and AM4 refer to the Empathy dimension, which the overall average gap is (-2.56). It is the worst average among the five dimensions. It is not surprising, because this dimension is about caring, individualized attention that a university provides to its students, and the crowded number of students is obstacle to do such. One of the students stressed *"Supervisors are not accessible when students need them, as well as, students do not have easy access to the administrator to express their opinion and suggestions.*

As it can be seen from Table (7.2 and the Figure (6.22), that the students' expectations in all dimensions of service quality in (FU) were not met. Regarding the mean differences, it is clear that the highest gap were observed in Reliability (-2.38) following by Tangibility (-2.68)

6.6 Comparison between the Service Quality at Both Case Studies

Table 6.3 Comparison between the Service Quality

Case study	expectation	Perception	Gap
AGS	4.51	3.46	-1.05
FU	4.54	2.16	-2.38

The Table (6.3) shows that the gap (G) between the expectation (E) and the Perception (P) of the both case studies. It can notice that the gap at the (AGS) **(-1.05)** is less than at the (FU) **(-2.38)**. This means that the student at the (AGS) is more satisfy regarding the services that been provided to them.

Also, based on the results all the dimension of the SERVQUAL at the (AGS) is better than (FU). It means that the students of (AGS) are more satisfy with the services provided to them.

6.7 Summary

This chapter has provided a discussion of the findings and their implications. Many issues have been highlighted which affect the quality services and programmes offered by Libyan HEIs in general. For example, the absence of education and training programmes for staff members leads to confusion of quality concept among the top management. Also, leadership of Libyan HEIs has encountered great changeability and unsettledness. In addition, there is a lack of an effective and efficient measurement approach. The shortage in the infrastructure is another remarkable factor that influences the provision of good quality services. Likewise, ineffective reward and recognition systems adopted by Libyan HEIs including the both case studies plays an important role in frustrating the motivation and incentives needed for staff members.

Moreover, the chapter has concluded that the students in the case studies are not happy with the services that provided to them, although that the AGS is better than the FU. And the reasons for that have been discussed as well.

The next chapter will present and discuss the proposed framework depends on the research findings, literature review and experiences of universities around the world.

Chapter Seven: Proposed Framework

7.1 Introduction

After reviewing the TQM literature in Chapter 2, and TQM in higher education in chapter (3), as well as the experiences of the world-class universities, the researcher proposed a TQM model that might be suitable for the Libyan higher education institutions. Then, the feasibility of implementing TQM in the case studies was examined through questionnaire and interviews with the top management in the both case studies.

The frame work based on the fact that the shift from traditional management to a TQM culture is revolutionary and should come after profound thinking about what is involved during every stage of the transformation.

There is an agreement among the TQM authors that self-assessment of quality culture should be the first step in TQM implementation (Ford, *et al.*, 2006, Jose Juan *et al.*, 2007, Hides *et al.*, 2004, Tari *et al.*, 2011, Vermeulen Werner *et al.*, 1997, Fox, 1991, Juran *et al.*, 1993).

For example, Zink (1997) stated "*Self-assessment is a powerful management tool: it provides directions for continues improvement initiatives in the crucial result area*". And, Hashmi, (2010) stated*" A preliminary step in TQM implementation is to assess the organisation's current quality culture*). This is due the actuality that The Self-Assessment process allows the organisation to discern clearly its strengths and areas in which improvements can be made and culminates in planned improvement actions which are then monitored for progress.

In addition, TQM influence considers employees in an organisation have opinions, beliefs, and practices concerning quality.

To influence employees to change, assess the current organisation's quality culture by using questionnaires and focus group to assessing the quality culture.

Based on the above, this frame work take in consideration that the assessment of the current situation of quality culture at organisation is the first and important step to adopt any transformation.

7.2 TQM Framework

The reviewing of TQM literature revealed that the TQM gurus provided only guidelines and did not offer a specific framework for implementing the TQM principles. Thus, The development of this model was based on the TQM literature review, the interviews with some top management at the Libyan higher education sector, and lessons learned from the universities that been visited by the researcher.

The model can assist its users in evaluating the strengths and weaknesses of their quality culture, targeting their improvement areas, setting up an action plan for improvements, and tailoring a special part to the needs of their institutions.

The TQM implementation frame work developed in this study consists of three stages as it shown in Figure (8.1):

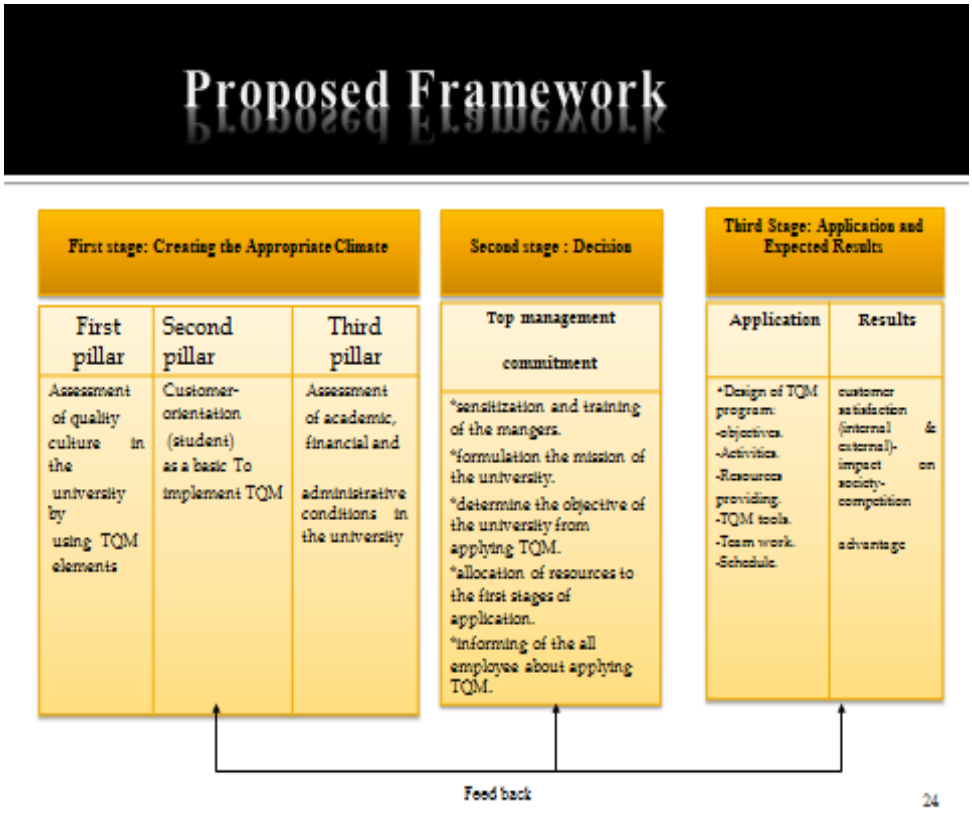

Figure 7.1 TQM Framework (Author)

7.2.1 Stage One: Creating the Appropriate Climate:

In order to achieve a dynamic, flexible and adaptable environment which lead all members participate in problem solving, value adding results and corporate success, the intuition requires culture change (Morgan, 1997).

Implementation of TQM successfully needs changing of many attitudes, thinking developed. However, the necessary changes will not happen without planned, purposeful action. Moreover, the stage one is composed of three pillars:

7.2.1.1 Pillar One (Assessment of Quality Culture):

Organisation development is concerned with the analysis and diagnosis of the factors that determine organisational quality, and the planning and delivery of programmes to enhance the quality. The culture of the organization should be developed to support continuous improvement, improve employees' style of performing their job and thus develop quality awareness (Olu, 2009).

The assessment step of quality culture is extremely important, where an in-depth cultural assessment, can enable an institution to determine the difference between its current culture and its desired culture. This information can then be used to design interventions for cultural change. So, the main aim of this pillar is assessment of quality culture in universities by using CSFs to ensure implementing TQM Successfully. Figure (7.2) illustrates the assessment process.

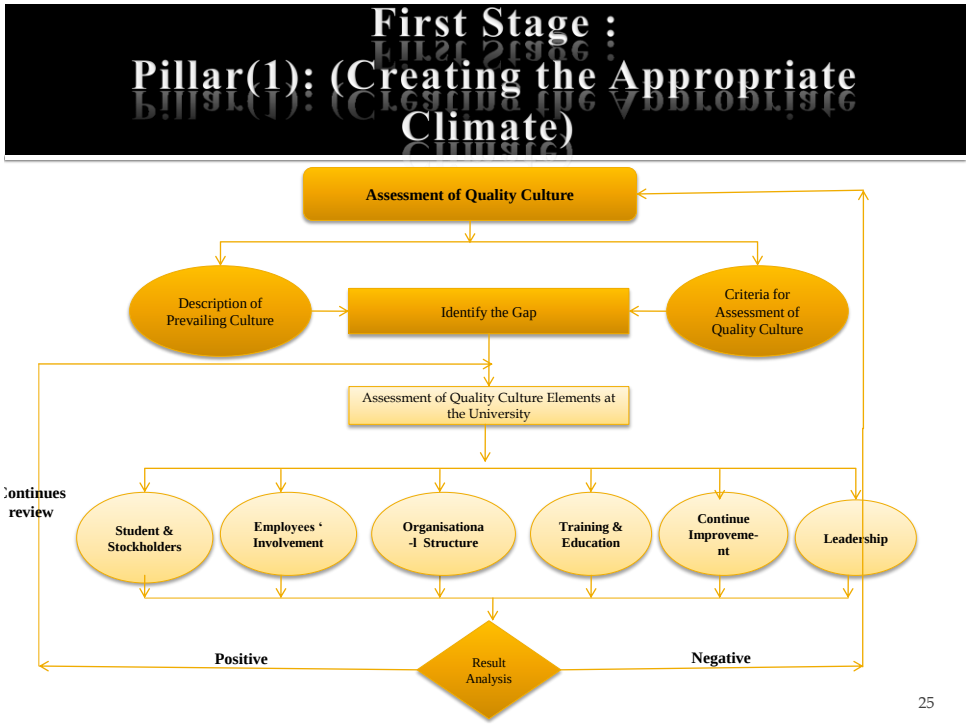

Figure 7.2 Assessment Process (Author)

TQM initiatives will be more successful if they are implemented in a supportive culture which is one that will allow learning for the members of the organization (Mohamed, *et al.*, 2008). He adds that the supportive culture should emphasise teamwork, employee empowerment and participation, continuous improvement, a customer focus and an appropriate leadership. Therfore, before implementing TQM principles, it is necessary to conduct and analysis of the organisational culture.

So, this pillar starts with finding the gap between the prevailing culture at an institution and the culture that adopts quality elements. For example, a company may wish to assess its desired competencies for success and match these against an assessment of its existing culture. Such a gap analysis can enable a company to develop appropriate interventions ranging from leadership development to large scale system changes to enhance its ability to achieve its strategic objectives.

Additionally, when reviewing the organisational culture, it is necessary to assess the readiness of the organization for concepts such as TQM. The organizational culture should reinforce and promote.

As mentioned earlier the critical success factors (CSFs) utilised as a criteria for culture assessment are:

- ✓ **Leadership;**
- ✓ **Training &education;**
- ✓ **Continues improvement;**
- ✓ **Student& stockholders;**
- ✓ **Employees' Involvement;**
- ✓ **Organisational Structure.**

The significance of each factor for implement TQM successfully was covered in chapter (2). In this section guidelines for applying every factor are presented. In this pillar the intention is to close the gap between the desired and existing quality culture through following these guidelines.

Leadership

The leaders of an organisation have the main responsibility for the quality produced by the organization, i.e., the success of the mission. So, the commitment and participation of leaders have long been recognized as critical factors in successful organizations (Tichy, 1990). Academics and practitioners both agree that appropriate managerial leadership is one of the factors that determine the variation in the success rate of TQM implementation (Perles, 2002).

In support of these leadership practices, Deming identified some responsibilities and characteristics unique to leaders (Suarez, 1992). It is the responsibility of leaders to:

- ➢ Teach their people how the work of the group supports the aims of the organization.
- ➢ Act as a coach and counselor, rather than simply as a judge.
- ➢ Not rely solely on formal authority, rather develop systems knowledge and interpersonal skills.

- Be an unceasing learner. Encourage everyone to study.
- Create an environment that encourages participation and innovation

Based on the literature review and the empirical study, the universities should take in consideration these elements:

- The leadership style must be democracy, which is a very open and collegial style of running a team. Ideas move freely amongst the group and are discussed openly. Everyone is given a seat at the table, and discussion is relatively free-flowing.
- Enhancing employee involvement in decision-making.
- Creating a new organisational culture with small group activities and teamwork, introducing new policies and procedures to reward the employees, and executing evolutionary changes that were enthusiastically accepted by the employees.
- Delegation of authority to the low levels.
- Leaders must enable all employees to participate in the preparation, implementation and evaluation of improvement activities (Pun, 2001; Lau & Idris, 2001; Leiter, 2002).

Leadership commitment to the TQM implementation will have a great effect on the success or failure of the project. However, the leadership should fully what it wishes to receive from implementation?, and what approach will the leadership follow?. Again a lack of knowledge often leads to implementation approaches that can only have a chance of failure.

Training and Education:

A successful TQM environment requires a committed, well-trained, and educated work force that participates fully in quality improvement activities. Insufficient training on quality as well as training in problem identification and problem solving techniques leads to failure in TQM implementation program. Training is fundamental in transforming the workforce so that it can function in the demanding TQM environment. For quality training to be effective, however, it must be planned in a systematic and objective manner. Quality training must be continuous to meet not

only changes in technology, but also changes involving the environment in which an organisation operates its structure and the most important of all, the people who work there. Klefsjo¨ (2002) have reported in their studies that poor education and training acts as a major barrier in the development and implementation of quality program.

Based on the finding from the case study, the university should pay attention to these elements:

- Assessment of training programmes to investigate whether any gap between the current training and TQM training needs.
- TQM training is unending and continuous.
- TQM training curriculum must be well-developed with an acceptable TQM training strategy and plan, and should be all inclusive and should address all issues which would contribute to the improvement of quality
- Employees require three basic areas of training namely in the principles of TQM, the use of TQM tools and problem-solving techniques (Vermeulen et al., 2000).
- Top management should receive TQM training first.
- Expert outside consultants should be contracted if internal expertise is not available
- Encouraging senior staff of the university to participate training courses on delegation, staff participation and empowerment.
- Allocating sufficient financial resources for training programmes.
- The training programmes should be offered equally to the all staff according to the needs of the university.
- Provide training for employees in interactive skills. Manage the training programme to provide systematic training for employees to improve their communication skills, effective meeting skills and empowerment and leading skills.

Continues Improvement

Self-evaluation practices, benchmarking and student feedback are more likely to lead to continual quality improvement efforts.

The continuous quality improvement mission of the University is to create a proactive and enthusiastic culture of Continuous Improvement that promotes efficiency, productivity, and service excellence for internal and external stakeholders of the University.

It is also important to recognise that continuous improvement activities take place all the time and can range from small incremental improvements introduced by individuals, to large organisational projects around process change.

Moreover, for continuous improvement, it is very necessary to evaluate the current process and total quality management practice. A formal evaluation of quality provides a starting point by providing an understanding of the size of the quality issue and the areas of demanding attention (Juran *et al.,* 1993).

Student & Stakeholders:

This presents what the university must do to delight the customer by consistently meeting customer requirements, and then achieve a reputation of excellence. so the LHEIs must gather needed data and information by means of focus group, questionnaires in order to understand and identify the customer needs. Moreover, the relationship between businesses and universities must be vitally linked. Universities could enhance and support its relationship with business and industry sectors by establishing contract and collaborative research with these sectors.

The other sectors should involve in developing courses with universities. Such involvement includes for example design and joint supervision of PhD project work, advising on course content and providing additional lectures.

Additionally, links with other sectors help to develop graduates with the right skills and increase people's awareness of the job opportunities and influence the content of courses to reflect the knowledge and skills needed for those jobs.

Organisational Structure:

It should influence the implementation and impact of TQM. Organically structured organisation will be more flexible and decentralized (Mintzberg *et al.*, 1992). This type of organisation aids in TQM implementation (Tata, *et al.*, 1999). The support structures and system of the institution should not be static , but flexible and should encourage the flow of new ideas and information to improve the management of quality .

The bureaucratic structures of HEIs are reported to undermine the application of the quality models. So the university should Keep employees informed and get their feedback. Establish top-down and bottom –up communication modes to keep employees informed (about the progress being made and successes of quality initiatives achieved by individuals and teams), and to get feedback (using employee survey, face-to-face meetings, workshops or suggestion schemes). This requires the use of a variety of communication modes emphasizing face-to-face communication. The following communications approaches could be adopted to gather and deliver any messages regarding the quality issues:

- Face-to-face meetings.
- Question–answer sessions.
- Posters.
- In-house news bulletin.
- Training and workshops.
- Memos.
- Employee surveys.
- Suggestion schemes.

This might require establishing a committee to review the communication modes and strategies and accordingly make recommendations for improvements.

Employees' Involvement

The TQM ultimately has to involve all employees to be successfully integrated. It always requires the employees to be empowered to make continues improvement changes within the scope of their quality tasks and responsibility. This empowered must enable them to make their suggestion, recommendation and implement their decision.

Promote teamwork as one of the organisation's guiding values. It is due the fact that the collaborative teamwork is more effective than individuals.

Rather than keeping all the quality efforts with the head of the institution, a core team of the most efficient staff can be formed. One member can be chosen as the TQM master for a specified time. The team should be given the responsibility of TQM environment building across all the sections of institution and among all the levels of employees. And reinforce teamwork by rewarding and recognizing successes.

7.2.1.2 Pillar 2 (Student- Orientation)

As students are viewed as an essential part of the learning process (Wiklund *et al.*, 2003), the university should adopted mechanisms to set a self-evaluation practices and student feedback. This type of evaluation tends to be more formative in nature and therefore more likely to lead to continual quality improvement efforts. Figure (7.3) shows the pillar 2 which including the student satisfaction assessment.

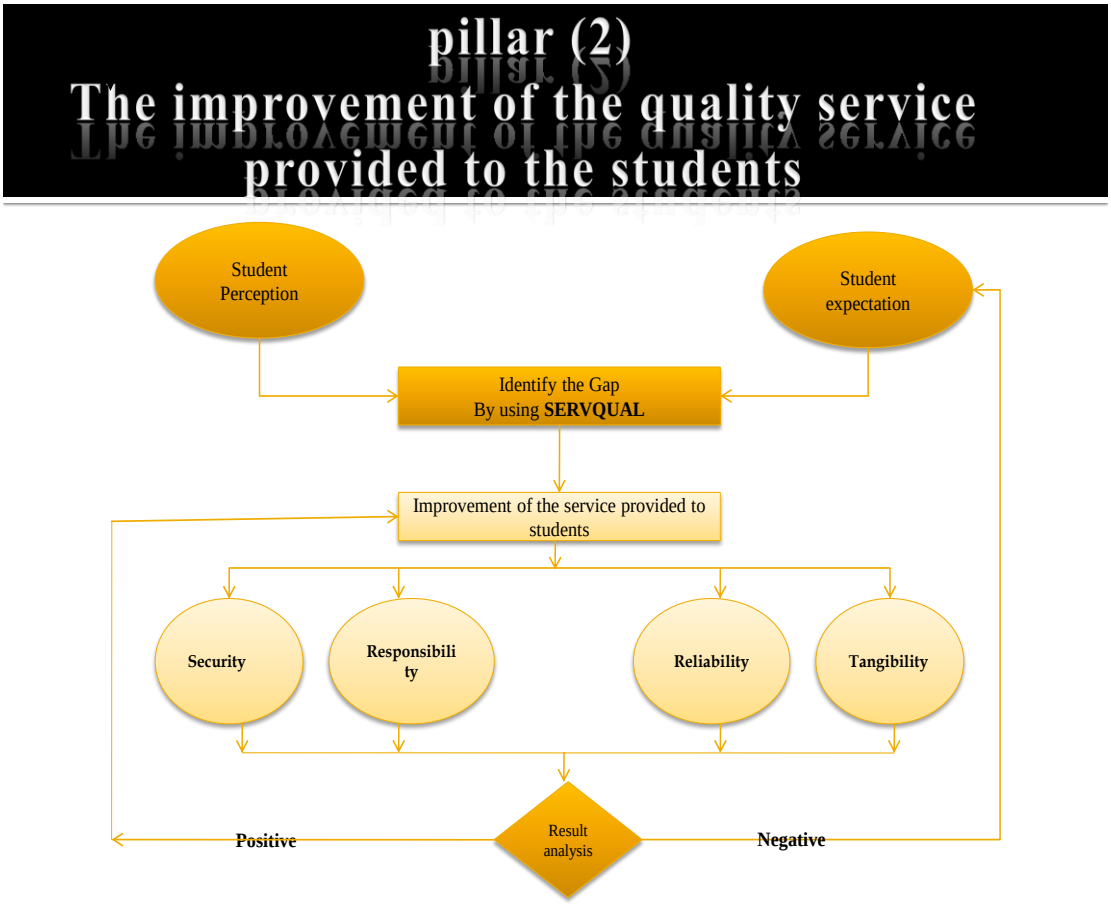

Figure 7.3 Student Satisfaction Assessments

The student satisfaction assessment is very important for any academic institution; it gives the university a powerful tool to improve the quality of student life and learning. It measures student satisfaction and priorities, showing how satisfied students are as well as what issues are important to them. So the university can use the feedback to:

- Guide strategic action plan.
- Strength student retention initiatives
- Meet accreditation requirements.
- Identify areas of strength for instructional marketing

Reviewing the literature has revealed many instruments that been used to obtain the feedback from students. And universities have been using a lot of types for student's satisfaction assessment. However, the SERVQUAL is one of the most important and widely used instruments; Section (3 .2.8) has focused in this instrument that adopted in this framework.

It simply means the identifying the gap between the expectation and perceptions of the students in terms of the main four dimensions including: (Tangibility, Reliability, Responsibility and security).

It is important to note that, Satisfaction is a dynamic process that depends on institutions asking for feedback from their students and acting upon the information received. Furthermore, students need to be made aware of the action that has been made so that they can see that the feedback process is worthwhile and not merely an empty gesture (Williams, 2008).

This pillar of the framework intents to understand and analyse the gap between perception of service quality for the university and a university that is (excellent). The results then can be used as a driver for service quality improvement.

On other words, the pillar is a diagnostic tool that uncovers a university's weaknesses and strengths in the area of service quality. And the assessment of student satisfaction gives an idea about that area needs improvement, which expectations that cannot be fulfilled on the institutions are the key factors for students' withdrawal.

7.2.1.3 Pillar 3 (Assessment of Academic Condition)

It is important for the university to maintain well-balanced academic environment conducive for better learning, with the focus on the students' personal needs.
Students' expectations vary with respect to personality and their backgrounds which influences on how one perceive the environment around him/her. Students at the university have different expectations, goals, and values that they want to fulfill at the university, which is only possible if the students' expectations, goals, and values are integrated with that of the university (Goodman, 1993).

Academic assessment procedures take into account relevant information regarding the curriculum materials in which a student is receiving instruction. Such information might include the scope and sequence of objectives, teaching examples and techniques used to introduce new material, the relative rapidity with which new

concepts or objectives are introduced and/or opportunities to respond and practice new skills in workbooks or other materials. Consideration should be given to the relationship between the student's skills and his/her placement in curriculum materials, since placement in materials that are too difficult or too easy may result in problems.

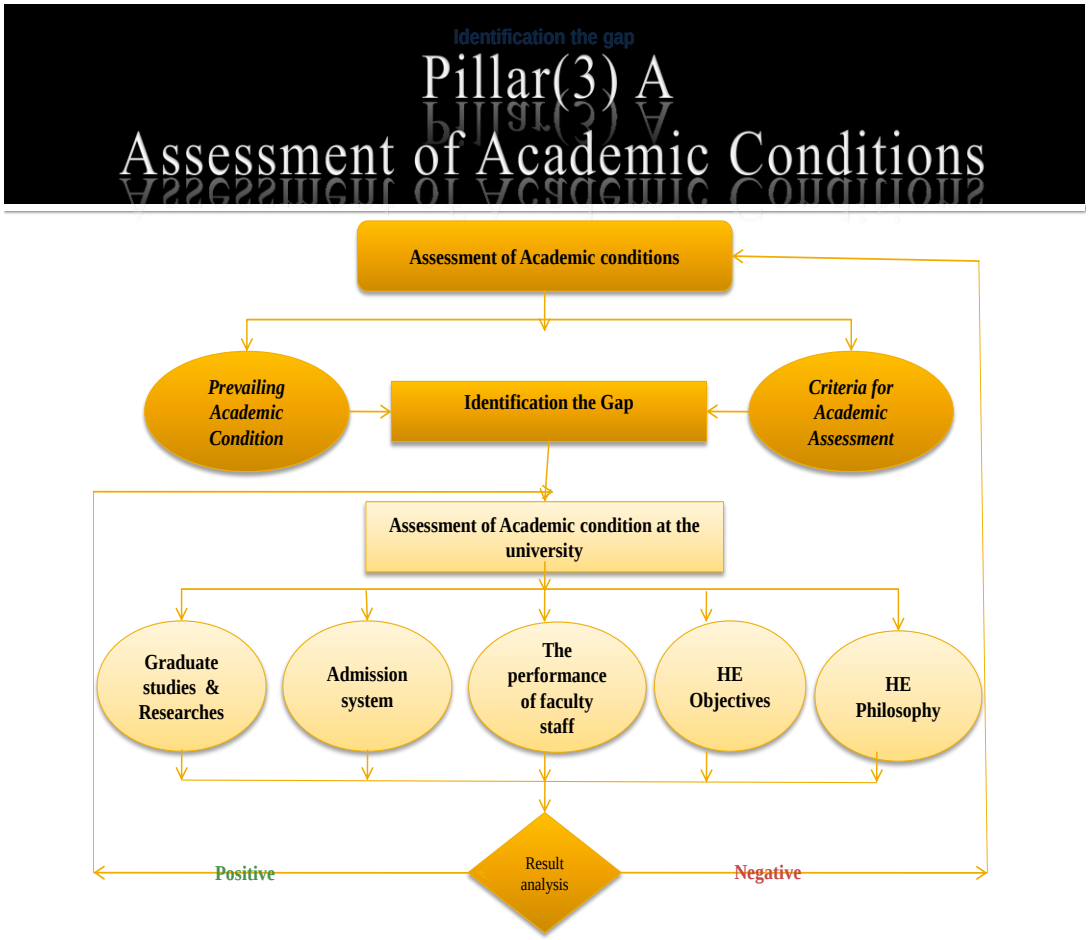

Figure 7.4 Academic Assessment

The Figure (7.4) shows that the assessment of academic situation depending on a set of criteria in the light of TQM Including: HE philosophy; HE objectives; Admission System; Graduate and Research and performance of faculty staff. Thus based on the empirical study the University should take into account the following:

- The higher education body should reformulate the philosophy of higher education by reflecting the characteristics and the main features of the new variables within the concept of TQM.

- The objectives of higher education should be developed to connect the universities with the social and meet the needs of developing.
- The successfully recruitment of faculty requires a commitment of human and financial resources as well as a logical plan that takes into account the particular needs and resources of the individual department
- The recruitment of new faculty staff should base on sound principles and practices and provides fair and equitable treatment of all applicants, and attracts the most talented and qualified individuals for the position.
- The University should keep in mind that performance assessment is scheduled to insure that every regular employee (appointed or hired) is evaluated annually prior to reappoint for the second year.

- ✓ The university should pay attention and consternate on the postgraduate studies and scientific researches and concerning the problems of the society in these researches.
- ✓ The university should develop the admission system in order to connect the desires of students and their abilities with the disciplines that want to attend.
- ✓ The university should link the student admission system and the needs of the labour market.
- ✓ Various collaborations with foreign universities, granting joint degrees, where students perform 3 years at a public university and last year at a foreign university. This helps in the exchange of experiences between universities.

Finally, Performance management is the process for assessing the overall performance of a faculty staff and making plans for their future development. Thus, the university should have guidelines and procedures in place in order to evaluate the performance of the staff. The reviewing of the literature has revealed many examples for assessment of faculty staff performance. For example the University of Texas in the US stated: **"**The *purposes of performance evaluations are (1) to provide a fair assessment of the employee's performance, (2) to assist the employee to improve performance, (3) to provide a basis for an appropriate level of compensation, and (4) to support and provide documentation for personnel actions under approved policies"*

7.2.1.4 Pillar 3 (Assessment of Financial Condition)

The figure (7.5) shows that the assessment of financial conditions based on criteria that contribute to enhance the quality of education.

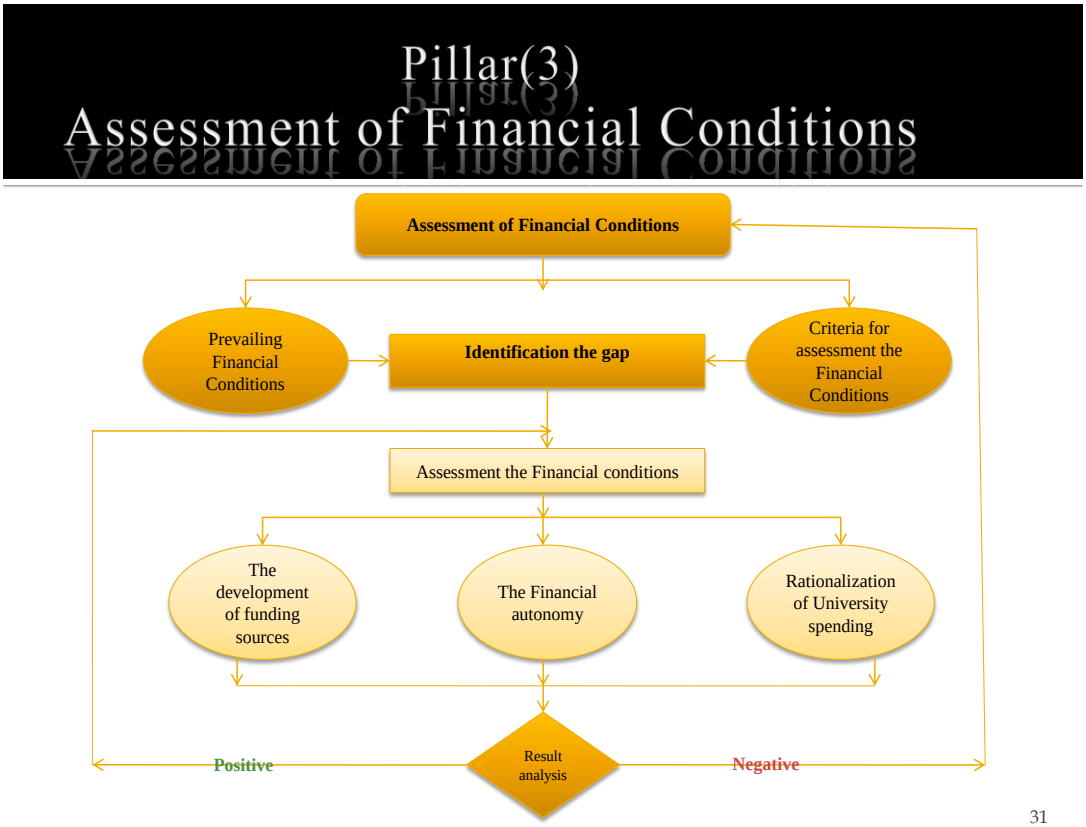

Figure 7.5 Assessments of Financial Conditions

Based on the finding from the literature review and the empirical study the university must focus on:

- ✓ Establishment of better relations with companies, as well with public institutions, where many private institutions fund various activities organized by universities such as conferences, etc.,
- ✓ The cooperation between the higher education institutions is necessary, where that many universities today in the world are adopting methods previously applied by businesses.
- ✓ Financial Autonomy where the university can accomplish its goals
- ✓ Rationalization on university spending and link its expenditure with the social and financial development and the need of the labour market.

- ✓ Developing and modernizing of the financial resources and not only relay on government support.
- ✓ Optimizing the use of available resources.

7.2.2 Stage 2 (Decision of Implementation)

Stage two of the framework is the starting of TQM implementation. The first step of this implementation is beginning with commitment and conviction of the top management for the changing and the necessity of development and continues improvement. The implementation decision is a strategic decision which must be taken at the top management level. Thus the top management should creating the appropriate climate before the starting point for action through some steps that illustrated in the Figure (7.6)

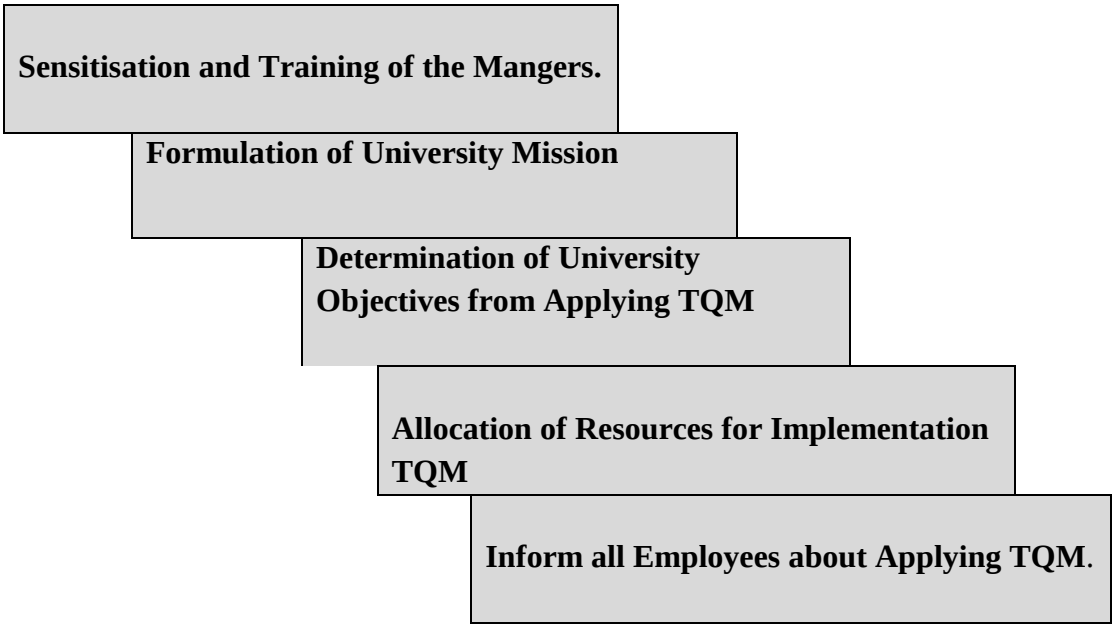

Figure 7.6 Steps of Making the Implementation Decision

The Figure (7.6) shows the Sequence of the Five Steps for Taking implementation decision.

7.2.2.1 Step 1: Training the Managers

As mentioned early, The emphasis of step1 was to encourage the top management to know what they are doing and where they want to go, before they embark on their quality journey, by educating themselves and exploring their knowledge of quality

management systems and how they can benefit from adopting TQM or any other quality approach. Awareness of TQM can be achieved by training the top management, this training programmes should be done by expertise of applying TQM either inside or outside the university.

The top management should attend awareness courses, seminars, workshops and conferences, until they have a certain level of knowledge which enables them to judge the improvement initiatives coming from their staff and consultants, be able to make the right strategic decisions, and develop solutions and innovative approaches within their organisations. Leaders should know how to benefit from the experience of others and how to benefit from the experience of the other higher educational institutions that have already shifted their culture to a better competitive position by adopting and adapting TQM successfully.

Before committing themselves, top management must systematically understand the TQM philosophy and how its principles can be applied.
Following this awareness raising and training, top management should form a TQM steering committee to manage the whole of the activities of the TQM project and provide support to quality management teams.

It is worth to say that TQM journey should start with a solid belief and commitment to the philosophy of TQM by the top management. It requires significant changes in management philosophy and behaviors; it requires new priorities, additional resources, energy, time and consistent support. Top management will not provide such backing until they are convinced that the improvement programme makes sense. Quality improvement is a continuous process and should not be thought of as something with a beginning and an end. Without a strong commitment from the top to develop a healthy culture, based on fairness, respect, trust, open communication, shared information and teamwork, most organizations will not get very far in TQM.

7.2.2.2 Formulate the University Mission

A Mission is defined as 'Purpose, reason for being'. And defined simply "Who we are and what we do". It is the vehicle which leads to the vision. Ideally it should be one sentence, easily repeatable, and inspiring. A mission statement defines the company's purpose.

For example, the mission statement of Coventry University is "*we aspire to be a dynamic, global, enterprising university. We will work in partnership with external organisation through our research and engage our students as partners in a community of learning.*

Criteria for Evaluating a Mission Statement

For a university to formulate its mission, these following questions should be asked:

- Does our mission statement tell who our customers are?
- Does our mission statement explain how our university will serve its customers?
- Is our mission statement based on our core competencies? (A core competency is university strength.)
- Is our mission statement motivating and does it inspire employee commitment?
- Is our mission statement realistic?
- Is our mission statement specific, short, sharply focused and memorable?
- Is our mission statement clear and easily understood?
- Does our mission statement say what we want to be remembered for?

In addition, developing a mission statement is not a small task; it requires a real understanding of just why the university exists. The mission statement is also hierarchical; the department's mission depends on the college's mission, which depends on the University's mission, and so on.

Once the mission statement is developed, everyone (not just the faculty and administration, but everyone employed by the University) must know how they contribute to the mission.

Thus the mission statement of the university is very important step towards the implementation of TQM.

7.2.2.3 Determination of University objectives from applying TQM:

This step aims at making all the employees are aware about the benefits and objectives from applying TQM. For instance these objectives can be considered:

- The university operates efficiently and effectively.
- Improving the quality of educational services.
- Increase the share of the university in the labour market.
- Improving the economics of higher education
- Excellence in university education and scientific research.
- Increasing the university's ability for the continued growth.

The benefits from adopting TQM in higher education institutions (chapter 2) could be used as applying objectives.

7.2.2.4 Allocation of the Resources for Implementation

In order for a business to survive and continue operation, all resources (financial resources, information resources, buildings, materials, equipment and technology) should be managed in an effective and efficiently way.

Thus, the decision to continue and progress towards implementation of TQM needs resources especially for the starting stages.

In this step, all these resources should be allocated to assure the successful of the implementation.

7.2.2.5 Informing the Employees about Applying TQM

This means that all the employees at the university should be informed about the implementation decision and let them aware about the benefits they will gained as a result of enhancing quality.

TQM philosophy, strategy implementation must involve a focused effort on the part of every employee within the organization. It cannot be applied successfully on a piecemeal basis. TQM requires that management, and eventually every member of the organization, commit to the need for continual improvement in the way work is accomplished.

Employees are more committed and experience more job satisfaction when they are informed and allowed to participate in applying TQM.
Thus, in order to facilitate the widespread and active participation of the employees in organizational activities, the employees should be informed by the management about the applying of TQM.

7.2.3 stage 3 (Application and Expected Results):

This stage consists of two elements: applications and results

7.2.3.1 Application

Once the top management convinced of the benefit of TQM and showed fully commitment to adopt it, and when it decides to implementation stage, the starting point will be the designing of TQM structure (infrastructure) programme.

Figure (7.8) shows the proposed organisational structure for TQM in higher education, and the relationships between the units.

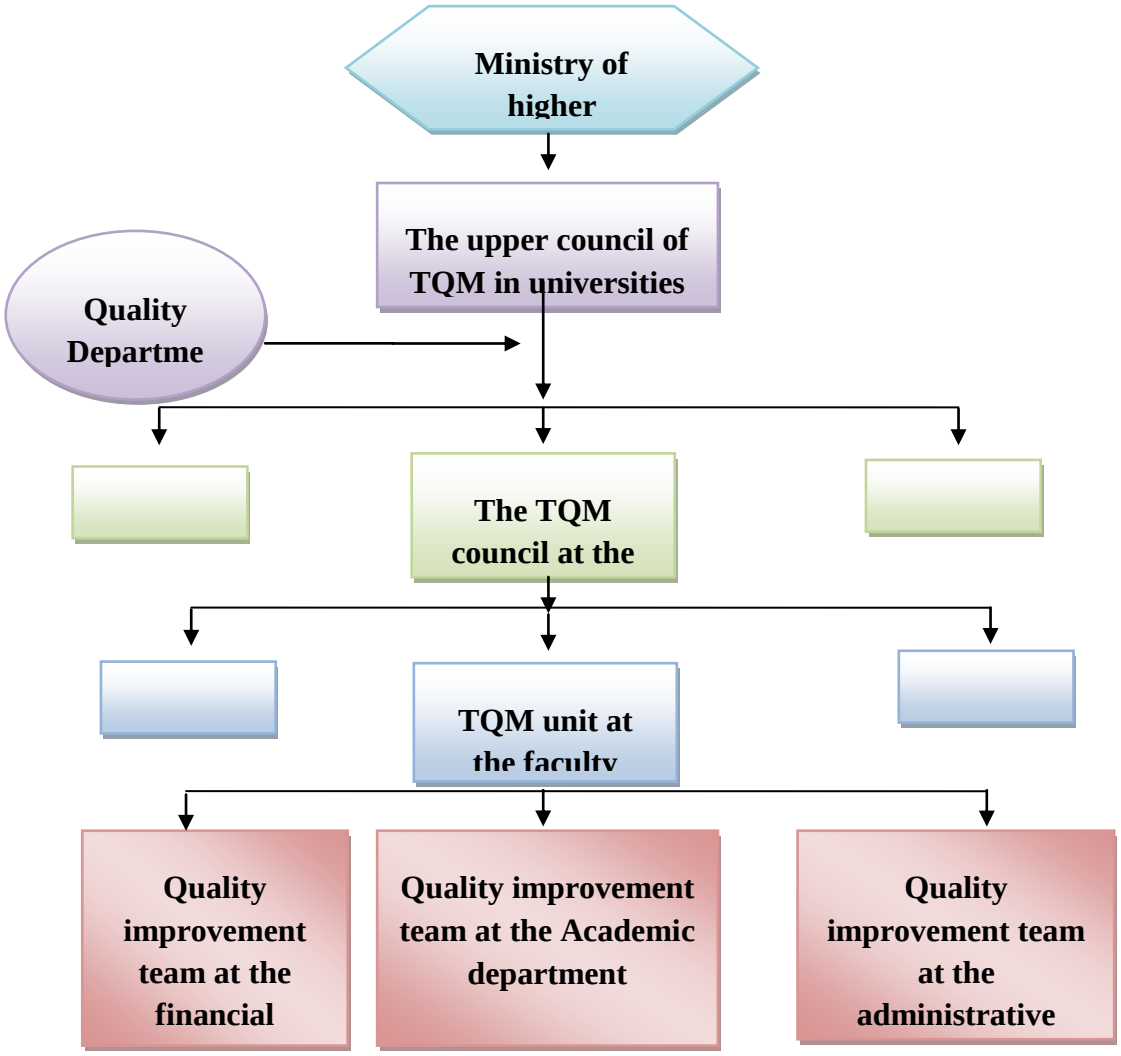

Figure 7.7 proposed Framework

It can be noted from the figure (7.7) above the following:

- Establishment of quality (upper) council for TQM is the starting point for organizing the structure. This council consists of the heads of quality committee at the universities level. It works as steering committee which is responsible for :
  - ✓ Set up a comprehensive training plan which makes the roles for employees involved in the TQM implementation clear. And to overcome the barriers to quality improvement.
  - ✓ Ensure the involvement of all reverent stockholders in service improvement activities.

- ✓ Review current practices to detect, manage and prevent deficiencies in service delivery.
- ✓ Coordinate the various quality efforts. Its main aim is to ensure that the quality policy is understood and implemented.
- ✓ Remove all the obstacles to the application.
- ✓ Cooperation with the quality committees at the universities about the assessment of the quality culture and determine the change process needs for every element.
- ✓ Allocate the sufficient financial and human resources that necessary for the implementation.
- ✓ Coordination between unites of TQM at the universities and faculties.
- ✓ Cooperation with the labour market body to meet the market needs.
- ✓ Conducting researches aimed at development of educational curriculum.
- ✓ Set up plans and applied to the minster of higher education about the infrastructure and the capacity of every faculty in order to it into account in admission systems.
- ✓ Set up the assessment criteria for the academic performance.

However, the first step is to train the steering committee. They must be properly trained in team skills and problem-solving tools and techniques. Team training is regarded as the most significant step and the most necessary element of team effectiveness and success.

- Establishment of quality committee at the universities level which is responsible for:
  - ✓ Study the TQM and its applications.
  - ✓ Study the possibility of TQM implementation at every university
  - ✓ Propose a detailed plan and selecting of the quality team.
  - ✓ Follow-up TQM implementation through the team work that were formed.
  - ✓ Educate and train the staff on TQM.

- ✓ Making a regular meeting with the quality team.

- Establishment of quality teams at department's level;

These unites are responsible for implementation of the project that been proposed by the quality committee at the faculty level. The heads of the departments should be members in the quality teams. Also, they should be responsible for solving existing and emerging problems. This is in addition to their main role which is offering training and guidelines to the rest of the other employees for TQM implementation.
Thus, Team building skills are needed to develop the necessary climate and culture that values shared decision making.

7.2.3.2 Results

Once the TQM is applied the output expected will be:

- ✓ Top management realises the need for a firm commitment and investment of manpower and time, which in turn builds both consistency and a feeling of urgency;
- ✓ Deployment - vision and strategies;
- ✓ Employees at all levels are aware of the broad aims or vision of the organization;
- ✓ A written but flexible plan sets out the organization's goals and targets;
- ✓ Top management and employees heading in the same direction and towards the same goals.

Additionally, as mentioned earlier, there many benefit from adopting TQM in the universities context. Among these benefits, the final result will be a more efficient operation and a teamwork attitude rather than an `us versus them' attitude between faculty and students.
By adopting the TQM message and applying teamwork to resolve such problems as low staff morale, low student performance, class cutting, and student failure, the university will be able to achieve its goals and to serve the community and will have positive influence on the whole country.

Moreover, TQM changes the organisational culture and creates a happy working environment. Due to effective delegation, empowerment, and total staff involvement, problems are identified and solved at lower levels (Antony *et al.*, 2002). Through open communication among employees, students and faculty staff, the true voice of the students and other customers can be more readily understood. As a result, enhanced customer satisfaction will be achieved.

7.3 Summery

This Chapter introduced the framework proposed by the researcher as a guideline to implement TQM in LHEIs. The framework consists of three stages. The emphasis of stage one was to encourage the top management to know what they are doing and where they want to go, before they embark on their quality journey by assessment quality culture in the university. This stage consists of three pillars; pillar one focuses on using the CSFs to assess the quality culture. This pillar enables a university to determine the difference between its current culture and its desired culture. This information can then be used to design interventions for cultural change.

Pillar two of this stage emphasis the need for top management to focus on student satisfaction and considering them as very important customer among the other stockholders. So, this effort provides the university with an overview and serves as a diagnostic tool to make improvements to programmes and services. This model has suggested the SRVQUAL instrument to assess the student satisfaction. It has been broadly used in the educational sector for assessing the extent to which a service meets customer's needs or expectations.

In worth to mention here it is very significant to measure service quality because it allows for comparisons before and after changes, identifies quality related problems, and helps in developing clear standards for service delivery. Pillar three (A) of this stage focuses on assessment of academic condition through reviewing the HE philosophy, He objectives, performance of the faculty staff, admission system and graduate study and researches. Pillar three (B) of this stage concentrate on the assessment of financial conditions which the autonomy plays a key role in implement TQM successfully. Chapter 8 will summarize the whole thesis and produce recommendation, limitation and future work

ChapterEight: Conclusion and Recommendation

8.1 Introduction

In this chapter of the thesis, the conclusions are highlighted. This includes revisiting the main aim and objectives of this research, and the research questions. The contribution to knowledge, recommendations for further related research and operational recommendations are also presented.

8.2 Thesis Summery

The specific research problem was identified through a review of (TQM) literature in higher education, studies that been done in Arabic higher education in general and in Libyan higher education in particularly and the researcher's own experience in the Libyan higher education sector.

The issue of quality management is becoming a necessity in the Libyan context, and is a worthwhile investment because of external and internal pressures.

The main aim of this study is to propose a framework through which Libyan universities could implement and maintain improved quality systems.

The concept of quality and its approaches were first introduced. This was followed by the development of quality starting with inspection- based system, quality of control, quality of assurance, and TQM.

The benefits from TQM and barriers and obstacles to implement it successfully were discussed.

Amongst the most significant factors that have contributed to the persistence and strength of the TQM model are:

- ✓ Influence of the teachings and writings of scholars such as Deming, Feigenbaum, Juran and Philip Crosby.
- ✓ Introduction of internationally recognised quality awards such as the Deming Prize, the Malcolm Baldrige, the European Quality Award, and Dubai award.

The quality management in service sector is difference from industry sector due to the features of the service. Thus, dimensions of quality in higher education were emphasized.

8.3 Meeting the Research Aim and Objectives

The main aim of this research is to propose a model for effective Total Quality Management (TQM) implementation in Higher Education (HE) applicable to the Libyan context**.** Ultimately, this aim has been achieved successfully through the research objectives being fulfilled. The specific objectives of this research are defined accordingly as:

The first objective was *"To investigate the current best practices and experience of TQM implementation in the world class university*". To achieve this objective, a critical literature review was conducted in chapter 2, section 2. This leads to understanding of TQM implementation at world class universities. . This understanding has developed from two main sources including: review of the literature of TQM in higher education and the experience of the universities with this philosophy. The second main resource was the field visiting that conducted by the researcher to the American university in Dubai and M.S Ramaih School of Advanced Studies in India. The finding from this two recourses was utilised (in addition to the finding from the empirical study) to build the implementation framework for the Libyan higher education.

The second objective was" *To investigate the extent to which the (LHEIs) adopt the principles of TQM".* To meet this objective a number of key TQM elements have been identified from earlier literature review. Those elements have been chosen as critical success factors, and were presented in the theoretical frame work. These factors were the most extracted across many studies on TQM especially in higher education context including: Top management commitment (Leadership), employee' involvement, continues improvement, student and stockholders, organisation structure, training & education, academic condition and financial condition.

Two case studies were selected; the first case study represented the private higher education (AGS) and the second case study from the public higher education (FU). The necessary data had been obtained from the top management at the both case studies and from the people who are in charge in the ministry of higher education. The main instrument had used is the questionnaire in addition to the interviews to gain an in-depth understanding about the TQM issues. Thereafter, the data were analysed using a narrative technique to interpret and present it in a meaningful form.

The questionnaire and interviews were used for assessment the practices of these elements at the case studies. The finding showed that the implementation of these elements were in early stage although that the (AGS) was better than the (FU) regarding these factors for the reasons that been mentioned earlier.

The third objective was "*To evaluate and measure the customer perception of quality service".* To meet this objective a SERVQUAL instrument was used to find the gap between the students' expectation and the actual service that been provided to them. Using SERVQUAL, service providers can obtain an indication of the level of quality of their service provision, and highlight areas requiring improvement. The gap score is reliable indication of each of the four dimensions of service quality.
Questionnaire was the main tool to obtain the date from students at the both case studies regarding four dimensions: Tangibility, Reliability, Responsibility, Security and Empathy.

A key finding of this study is that there was a negative gap between the expectation and the perceptions. This means that actual (the perceived score) was less than what was expected (the expectation score).
Finally, by achieving the research objectives, the main aim of this study mentioned above has been successfully achieved.
The purpose of the frame work is to provide guidelines to HEIs introducing TQM in order to indicate to them the way in which the various factors and features of TQM fit together.

Framework was built based on the literature review and field visit as well as the finding of the research. It consists of three stages including:

Stage One: create an appropriate climate. It is starting with assessment of quality culture. The quality culture of an organisation is the first aspect which needs to be evaluated with view to establishing the current state of quality in the organisation. This assessment provides information about the quality problems and the area that needs to be improved, and prepares the way for presenting a programme for action (juran, et al. 1993).

The model presented an assessment model to determine that area that needs improvement to put it in the top priority. The assessment used critical success factors which lead to know the factors that in dire need to focus on and put it in the top list of concentration in order to be improved.

Stage Two: decision of TQM implementation; the top management commitment is the core of this stage. To start the implementation process clear, consistent and noticeable involvement by top management is imperative part of implementing TQM successfully. Top management must understand and be committed to the objectives and methodology of TQM and be prepared to adopt them at all times. this second stage aims at sensitisation and consolidating top management's commitment and generating a consensus of vision and values about the TQM process. Regular review and self-assessment is also a part of Top management process. The cultural change is not possible without top management commitment.

Stage Three: This stage is about the application and expected results. It is including designing of TQM programme and using the tools and techniques which help the universities to have a broader picture of quality activities. As a result of implement TQM successfully, the university will assure the customer satisfaction both internal and external.

8.4 Conclusion

Based on the literature review, findings from empirical study through the questionnaire and the interviews, several conclusions can be drawn:

- This study has assessed the level of TQM implementation in a sample of Libyan universities. The both case studies were found to have a low level of implementation of the critical success factors, despite that the (ACH) is better than the (FU). It is due to: lack of knowledge of quality management systems, methods and tools; lack of top management commitment which caused a lack of vision; poor strategic competence and employee involvement; poor communication channels and a lack of customer satisfaction.
- The research revealed that the quality initiatives and practices in Libyan universities are still in their early stage.
- There is a lack of understanding of the value of empowering the employees' suggestions and engaging them in the universities' decision making. Therefore, it could be concluded that employee's empowerment should be studied as a separate factor from training in the Libyan context.
- There is not an adequate fund for providing the training programs in universities.
- there is no management training for heads of the institutions, principals and managers, they join their duties raw handed and they are unable to properly handle the situation,
- The assessment of the quality culture at the both case studies revealed that the current situation does not lead to implement TQM successfully. Members of top management are hesitant to educate themselves and become role models in leading the quality journey.
- The instability of leaders as referred by Soltani *et al.* (2008a) as mobility of management may threat the successful implementation of TQM initiatives in Libyan universities specially the public ones.
- There is a lack of knowledge and skills amongst individuals, which causes problems when they are assigned to teams on the basis of personal relationships, and this poses a barrier to effective team working.
- There is a need to fundamental change in the universities culture
- There is an ever-rising trend of expansion in enrolment of students in various universities especially in El-fath University.
- The students are not satisfied with the services provided by the LHEs.

- Libyan higher education is seriously underfunded, faces escalating demand, is staffed by under-qualified academic staff and often utilizes poorly planned curricula.
- Many colleges and universities suffer from inadequate infrastructure and weak instruction. The result is poorly taught students

8.5 Contributions to Knowledge

This study has made significant contributions to the body knowledge on TQM in the Libyan Higher Education sector by build framework for implementing TQM in Libyan educational instaurations. The main contributions of this research are presented as follows:

There is a lack of empirical studies on TQM practically in developing countries, and There is a gap in the knowledge and understanding of the implementation of TQM in various country of the world e.g. Africa, Middle East and South America ((Sila and Ebrahimpon, 2002).Thus, another contribution of this study is in the realm empirically-sound TQM implementation. This will contribute to fill the gap in the knowledge and understanding of TQM practices in developing countries by emphasizing the Libyan context.

Implications of the study are very helpful for Libyan HEIs to implement TQM practices and improve their quality, and for Libyan Government to support institutions to adopt TQM principles and improve their quality, which in turn, will have a positive impact on all other relevant sectors.

The study could enhance the thinking of the decision- makers in higher education institutions to adopt and adapt TQM principles to create a better management style enable them to provide services that meet the needs and expectations of their customers.

It makes a contribution to the knowledge about failures of TQM implementation attempts, which is high as 90 per cent (Soltani *et al.*, 2004). Such failure is due to the lack of clear guidelines and implementation methods (Thiagarajan *et al.*, 2001), and a lack of proper understanding of TQM (Mohanty and Sethi, 1996). Therefore, this

research has added rich information about the subject and enhanced the understanding of TQM.

This study raises the awareness of the significance of TQM programmes as important, strategically and philosophically, which could help companies to have a better understanding of how TQM could be effectively approached and implemented

Quality in the service sector literature in general and Higher Education in particular seems to be devoid of empirical studies that address the critical aspects of TQM from service perspectives, and this research offers a holistic study that will help researchers and practitioners to better understand the complexities of TQM in the HE context.

Moreover, this is the first study to propose a framework which will guide the Libya universities to implement TQM successfully and in turn to benefit from quality practices.

8.6 Recommendations for Policy Makers

8.6.1 General Recommendation:

1- These universities could develop a strategy for implementing TQM by paying more attention to the identification, analysis and adoption of an appropriate organisational culture that suits TQM implementation. And they should take into account that the successful implementation of TQM requires a quality culture to be implemented in universities through education, training and support from the top.

2- Employee's empowerment is an important issue in TQM implementation; thus, Libyan universities should pay more attention to how to satisfy those employees and increase their empowerment

3- The top management should care about the lack of fund, they must have funding plan available to procure the knowledge and skills training that they need.

4- At least one year training for heads of the institutions, principals and managers in management of institution may be given.

5- There should be balance between quantitative expansion and the quality so that increase in enrolment may not adversely affect the quality of education.

6- Needs of the society and the labour market should be linked with universities and admission system in particular.

7- Inadequate infrastructure and the associated resources should be considered, since the findings revealed a severe lack of resources and infrastructure (buildings including lecture halls, laboratories, libraries, poor book stock, poor journal stock, lack of computing facilities, and no internet access) in both case studies.
8- Reward and recognition needs to be applied and operated fairly in order to motivate people to improve their work, encourage people involvement and participation, support teamwork, and enhance collaboration and effective employee relations.
9- The University's mission and vision must be effectively communicated and explained to all people in face-to-face meetings in order that staff feedback may be obtained, and subsequent improvements made to the service provided.
10- Regular feedback is essential to both correct unwanted results and to encourage successful implementation.
11- Performance measurement and assessment is needed within a TQM approach.
12- Activation and encouraging the Centre of Quality Assurance and Accreditation for Higher Education (CQAA) in 2006 as a body to assess the performance of services provided by the Libyan HEIs and to offer accreditation of the academic programmes in accordance with the stated mission.
13- The function of enhancing quality should be taken out by the deans and head departments in cooperation and coordination with the quality committee in the universities and faculties departments.
14- Each faculty or school should have the freedom to adjust the quality policies to suit its peculiar goals and needs.
15- The top management of the universities should be given some flexibility and authority to interpret and apply efforts in a manner that would be meaningful and productive in their particular contexts.
16- The power and authority should be decentralised.
17- The negative quality gap in service dimensions should be used as a guideline for planning and allocation of resources.

8.6.2 Recommendation for Future Research

- Researchers, in the Libyan context in particular, and in the developing countries in general, should study financial issue as a TQM factor separate from top management.
- The proposed model provides a foundation to give other researchers the opportunity to develop and extend. It is possible that researchers could applied this model in one Libyan university and observe the results.
- As this study focused on two Libyan Universities, it is recommended that the methodology be used with other universities in countries with a similar culture (i.e. other Arab countries) in order to conduct a comparative analysis and facilitate the development of a deeper understanding of the topic in the Arab World.
- The secondary school sector is considered as an input to the higher education sector. Thus it is recommended to conduct such studies in secondary school where the improvement of quality in this sector will lead to enhance the quality of higher education.
- The list of factors identified by this research could be used by researchers interested in investigating the implementation of TQM approach in other sectors.
- Further empirical studies using large sample sizes and greater geographical diversity may be helpful in further validating the findings of this study.

Authore bublications

1- Errabou, A., (2009) ***"Quality Gap of Services in Higher Education for the Point View of Students"*** , International Working Conference in TQM. Belgrade.

2- Errabou, A (2010) " An Empirical Investigating of Critical Success Factors (CSFs) in Libya Organizations " International Conference on TQM in Egypt.

3- Errabou, A., (2011) *"Total* ***Quality Management in the Arabic World; Libya as a Case Study "*** Conference Department of International Journal of Arts and Science. Rome.

4- Errabou, A., (2011) *"Quality in Education Concepts and Implications*" Conference organised by Libyan Higher Education Ministry. Tripoli (Arabic)

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Appendix

Appendix A: Research questionnaire (Staff)

Dear all Participants

I am a PhD student at Coventry University conducting a study to investigate the Total Quality Management as a mechanism to enhance the quality of Libyan higher education. The research title is: (Total Quality Management as a mechanism to enhancing quality of Higher Education in Libya).

I have complied a short questionnaire that can be found on the next page.

Could you please answer all the sections honestly by selecting the best response for each question. And I would like to take this opportunity to assure you that all the answers will be kept strictly confidential.

The questionnaire will take only 20-25 minutes to fill out. Your collaboration is highly appreciated and will contribute to the success of this study.

If you have any question please contact me at abulgase@coventry.ac.uk or errabou2002@hotmail.com.

Thank you very much

Abulgasem Errabou

Coventry University

Section One: Demographic Variable: (Please tick the appropriate answer)

Gender ☐ Male ☐ Female

Age ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 +

Educational Background ☐ High school certificate ☐

☐ Bachelor's degree ☐ Master Degree ☐ PhD

Experience: ☐ Less than 1 year ☐ 2-7years

☐ 8-13 ☐ 14 and more

Section Two: Quality Culture

Please tick the appropriate number (from 1 to 5) that represents your opinion or answer each question below. Your answer to each question below will indicate the extent to which you agree or disagree with any of the following statement below: 5: Strongly agree; 4Agree; 3 Not sure; 2 Disagree; 1 strongly Disagree.

Leadership		**1**	**2**	**3**	**4**	**5**
1	Top management develops a university vision that incorporates quality value, performance expectation and focus on student and other stockholders.					
2	Top management provides the guidance, means, and encouragement for all workers to follow for success.					
3	Top management has a process in place to develop their awareness of the concept of Total Quality Management.					
4	Top management reengineered and developed the organizational structure to suit the TQM concept.					
5	Top management provides appropriate awards for person who brings up the ideas and method of improving the quality					
Training and Education						
1	The university provides training and education to minimize the mistakes and achieving high level of quality					

2	Training is focused on empowering people to take responsibility for quality.					
3	Training is determined according to actual needs that have to be covered by training					
4	Training is provided equally to all the staff.					
5	The university evaluates training output.					
6	The university keeps training records as a guide for future training and development.					
Continues Improvement						
1	University management has a program to simplify the steps required to provide the service.					
2	University management promotes and support all the ideas for quality improving					
3	University management has method to analysis the activities required to provide the services.					
4	University management adapts future plans to improve the quality, not only focusing on solving only current problems.					
5	The university adopts the (never ending process) of improvement.					
6	The management aimed to minimise the cost of different financial processes.					
Student & Stockholders						
1	The University has some organised effort to understand the expectations of other sectors regarding graduates.					
2	The university actively communicates with students, community and education authorities, to make them understand the actions and university policy.					
3	The university uses a variety of proactive method (e.g. students' surveys, focus group …) to determine student needs and their expectations.					
4	The university management listens to the stockholders and provides immediate solutions.					
5	The university examines the student learning effect periodically and checks whether students meet original standards.					
Employee Involvement						
1	The University management encourages employees to suggest new ideas for work improvement.					
2	The university management shares its faculty in finding the suitable solutions to the problems that					

	face the department					
3	Work responsibilities are delegated to the employees.					
4	Top management pushes decision making to the lowest level in order to encourage the employees involving in decision making.					
5	The employees feel they really the most important resources in the University					
6	The employees participate in problem- solving activities affecting their work.					
Organisational Structure						
1	University administration believes that it is necessary to exchange information with the staff, and different departments with each other.					
2	A system in place allows the university knowing the need of faculty, staff, and students through the communications channels or meetings					
3	There is a clear definition and concept of the list of tasks to be carried out by the all staff.					
4	The long terms goals of the university based on students and stakeholders requirements, the performance of comparable universities and key benchmarks.					
5	There is effective communication system within the university to ensure the flow of information and data vertically (from top to bottom and vice versa), as well as horizontally between the department in order to achieve the objectives of the university.					
6	There is a constant communication between faculty, administrations and programme managers through meetings in order to make university fully aware of any change.					
7	University has a clear procedures for employees' reward and penalties and applies them transparently					
Financial Conditions						
1	Financial resources available to the University are considered to be sufficient compared to the number of students enrolled to study at the university.					
2	Financial resources available to the University are sufficient to support the scientific activities developed by the University					
3	Financial resources are enough to train employees on the essential TQM techniques					
4	There is independence in the financial resources of the University to ensure that money is spent					

	according to the needs and priorities of the university.					
5	financial resources are sufficient for providing the books and journals and other equipments.					
6	Adequate financial resources are allocated to be spent on efforts to improve quality, and to encourage those who engaged in such business					
7	There is financial support from the university covering all the needs of scientific research carried out by members of the faculty and students.					
8	The university makes a good use of the allocated budgets according to the necessary needs in order to carry on its operation and enhancing the quality.					
Academic Conditions						
1	The number of members of the faculty of the university is considered sufficient to the number of students.					
2	University provides a system for faculty members and their associates allowing them the opportunity to participate in and contribute to scientific conferences and symposia					
3	The university has all the required services for the teaching staff such as: accommodation services, medical services and training services.					
4	Appointments of academic staff are based on the necessary skills required by the positions in the light of the university‘s needs.					
5	The selection of a teaching‘s staff member is carried out according to a good admission system and without any intervention.					
6	The university periodically reviews the curriculum and the syllabus to meet the needs of the society and keeping pace with modern curriculum.					
7	The admission system at the university is based on: the test score of every student, the needs of the labour market and the university’ infrastructure and facilities.					
8	There is cooperation between research centre in the university and other sectors to meet the needs of the community.					

Appendix B; Research questionnaire (Students)

Dear all Participants

I am a PhD student at Coventry University conducting a study to investigate the Total Quality Management as a mechanism to enhance the quality of Libyan higher education. The research title is: (Total Quality Management as a mechanism to enhancing quality of Higher Education in Libya). Part of this study is to evaluate the quality of services that provided to students.

I have attached a short questionnaire that can be found on the next page.

Could you please answer all the sections honestly by selecting the best response for each question. And I would like to take this opportunity to assure you that all the answers will be kept strictly confidential.

The questionnaire will take only 25-30 minutes to fill out. Your collaboration is highly appreciated and will contribute to the success of this study. Please note that the questionnaire make up from 2 parts; the first one about the expectation and the second one regarding the perceptions.

If you have any question please contact me at abulgase@coventry.ac.uk or errabou2002@hotmail.com.

Thank you very much

Abulgasem Errabou

Coventry University

Dear student

Please circle the appropriate number (from 5 to 1) that best represents your opinion or answer each question below. Your answer to each question below will indicate the extent to which you agree or disagree with any of the following statement below:

1= Strongly Disagree; 2 =Disagree; 3= Not Sure; 4= Agree; 5= Strongly Agree;

The first section is about the demographic information.

Demographic Information:

Age:

Gender:

Year of study

Expectations

Tangibility		**1**	**2**	**3**	**4**	**5**
1	Excellent higher education institutions must have modern equipment, such as laboratories.					
2	Employee and teachers at excellent institutions of higher education must present themselves (clothes, cleanliness, etc) in an appropriate manner for their position.					
3	The material associated with the service provided in excellent higher, such as journals, printed matter, must have a good visual appearance and is up to date.					
4	Higher education institutions must keep their records accurately.					
Reliability						
1	When excellent higher education institutions promise to do something in a certain time, they must do it.					
2	When students have a problem, excellent institutions of higher education demonstrate since interest in solving it.					
3	Excellent higher education institutions will do the job right the first time and will persist in doing it without error					

Responsibility						
1	School office staff/faculty tell me exactly when they are able to attend to my request simplify the steps required to provide the service.					
2	Employee and teachers at excellent institutions of higher education are willing and available during service providing					
3	Employee and teachers at excellent institutions of higher education will also show good in helping their students.					
4	Employee and teachers at excellent institutions of higher education are willing to explain doubts to their students.					
Security						
1	The behaviour of Employee and teachers at excellent institutions of higher education must inspire confidence in the students					
2	Students at excellent institutions of higher education feel safe in their transaction with the institutions					
3	Employee and teachers at excellent institutions of higher education must be polite to the students understand the actions and university policy.					
4	Employee and teachers at excellent institutions of higher education must have the knowledge needed to answer the questions of the students needs and their expectations.					
Empathy						
1	Excellent institutions of higher education must have convenient business hours of all students					
2	Excellent institutions of higher education must have employees and teachers who provide individual attention to each one.					
3	Excellent institutions of higher education must understand the specific needs of every student decision making.					

4	Employee and teachers at excellent institutions of higher education must be focused on the best service for their students					

Appendix C; Research questionnaire (Students) Perceptions

	Tangibility	1	2	3	4	5
	The Academy has modern equipment, such as laboratories.					
	Employee and teachers at the Academy present themselves (clothes, cleanliness, etc) in an appropriate manner for their position.					
	The material associated with the service provided in the Academy, such as journals, printed matter, must have a good visual appearance and is up to date.					
	The Academy keeps their records accurately.	`				
	Reliability					
	When the Academy promises to do something in a certain time, it does it.					
	When students have a problem, the Academy demonstrates since interest in solving it.					
	The Academy does the job right the first time and persists in doing it without error					
	Responsibility					
	School office staff/faculty in the Academy tell me exactly when they are able to attend to my request simplify the steps required to provide the service.					
	Employee and teachers at the Academy are willing and available during service providing					
	Employee and teachers at the Academy also show good in helping their students.					
	Employee and teachers at the Academy are willing to explain doubts to their students.					
	Security					
	The behaviour of Employee and teachers the Academy inspire confidence in the students					
	Students the Academy feel safe in their transaction with the institutions					
	Employee and teachers the Academy are polite to the students					
	Employee and teachers the Academy have the knowledge needed to answer the questions of the students' needs and their expectations.					
	Empathy					

	The Academy has convenient business hours of all students					
	The Academy has employees and teachers who provide individual attention to each one.					
	The Academy understands the specific needs of every student					
	Employee and teachers at the Academy focus on the best service for their students					

Appendix D: Quality models for HEIs

Module	Definition
TQM	A comprehensive management approach which requires contribution from all participants in the organisation to work towards long-term benefits for those involved and society as a whole.
EFQM excellence model	Non-prescriptive framework that establishes nine criteria (divided between enablers and results), suitable for any organisation to use to assess progress towards excellence.
Balanced scorecard	Performance/strategic management system which utilises four measurement perspectives: financial; customer; internal process; and learning and growth.
Malcolm Baldridge award	Based on a framework of performance excellence which can be used by organisations to improve performance. Seven categories of criteria: leadership; strategic planning; customer and market focus; measurement, analysis, and knowledge management; human resource focus; process management; and results.
ISO 9000 series	International standard for generic quality assurance systems. Concerned with continuous improvement through preventative action. Elements are customer quality and regulatory requirements, and efforts made to enhance customer satisfaction and achieve continuous improvement.
Business process re-engineering	System to enable redesign of business processes, systems and structures to achieve improved performance. It is concerned with change in five components: strategy; processes; technology; organisation; and culture.
SERVQUAL	Instrument designed to measure consumer perceptions and expectations regarding quality of service in five dimensions: reliability; tangibles; responsiveness; assurance and empathy; and to identify where gaps exist.

HE quality models adopted from (*Becket and Brookes (2008)*

Appendix E: The Arabic Questionnaire

اعزائي المشاركين

انا طالب دراسات عليا (دكتوراة) في جامعة كوفنتري اقوم باجراء دراسة حول ادارة الجودة الشاملة في التعليم العالي يليبيا تحت عنوان (ادارة الجودة الشاملة كاداة لتحسين جودة التعليم العالي في ليبيا) . تم تصميم الاستبيان الحالي والذي يحتوي على مجموعة من الاسئلة التي ستستخدم في اغراض البحث العلمي وستعامل بسرية تامة .

الرحاء الاجابة على هذه الاسئلة بكل دقة حتي يمكن الحصول على نتائج يمكن الاعتماد عليها علما بان الاسئلة من 20- 25 دقيقة

اقدر لكم تعاونكم والذي سيساهم في نجاح هذه الرسالة

لاي استفسار يرجي الاتصال على العنوان التالي

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ابوالقاسم علي الربو

جامعة كوفنتري

اولا : المنغيرات الديموغرافية

الجنس: ذكر انثى

العمر 20-29 30-39 40-49 اكثر من 50

المستوى العلمي دبلوم عالي بكالوريوس ماجستير دكتوراة

سنوات الخبرة اقل من سنة 2-7 سنوات 8-13 سنة 14 فما فوق

القسم الثاني : الثقافة التنظيمية

يهدف هذا القسم الي تقييم ثقافة الجودة السائدة بالجامعات الليبية . الرجاء الاجابة على جميع الاسئلة باختيار الاجابة المناسبة من :

(1) لااوافق بشدة (2) لااوافق (3) لادري (4) اوافق (5) اوافق بشدة

	القيادة	1	2	3	4	5
1	الادارة العليا تتطور رويتها ورسالتها باعتبار ان الجودة من اهم المواضيع التي يجب التركيز عليها					
2	الادارة العليا توفر الوسائل والاسترشادات التي من شانها ان تقود الى النجاح					
3	الادارة العليا لديها الية لتطوير وعي العاملين بمفهوم الجودة الشاملة					
4	الادارة العليا تطور هيكلها التنظيمي ليتناسب مع ادارة الجودة الشاملة					
5	الادارة العليا تطور من اساليب التحفيز وتوفر جائزة مناسبة للشخص الذي يقترح اقتراحات من شانها تطوير الجودة					
	التدريب والتعليم					
1	توفر الجامعة الخطط التدريبية للحد من الاخطاء وتحسين الجودة					
2	يركز التدريب على نمكين الناس من تحمل المسئولية وتحسبن الجودة					
3	التدريب يتم وفق الاحتياجات الفعلية والتي تستلزم وتتطلب التدريب					
4	يتم توفير التدريب بالمساواة بين كل الموظفين					
5	الجامعة تقيم نتائج التدريب					
6	الجامعة تحتفظ بسجلات التدريب كدليل للبرامج التدريبية في المستقبل					
	التحسين المستمر					

1	الجامعة لديها برامج لتبسيط الخطوات المطلوبة لتقديم الخدمة						
2	ادارة الجامعة تشجع وتدعم جميع الافكار اللازمة لتقديم الخدمات						
3	للجامعة طرق لتحليل الانشطة اللازمة لتقديم الخدمات						
4	تتبنى الجامعة الخطط المستقبلية لتحسين الجودة وليس فقط حل المشاكل الانية						
5	تتبنى الجامعة عمليات التحسين المستمر للوصول الى تحسين الجودة						
6	ادراة الجامعة تهذف الى تقليل التكلفة المالية بشكل عام ولكن ليس على حساب الجودة						
	الطلاب وحملة الاسهم						
1	للجامعة مجهودات منظمة لمعرفة احتياجات القطاعات الاخرى من الخريجين						
2	للجامعة اتصالات فعالة مع الطلبة ومسئولين التعليم والمجتمع بشكل عام ليكونوا في الصورة من سياسات الجامعة وخططها المستقبلية						
3	تستخدم الجامعة الكثير من الطرق العلمية لتحديد احتياجات الطلاب وتوقعاتهم (استبيانات الطلاب , المجموعات الفاحصة , دراسة الحالة ..... وغيرها)						
4	تستمع الجامعة الى المساهمين والطلبة والمجتمع بالكامل وتقدم حلولا الى كل المشاكل						
5	تقيم الجامعة وبشكل دوري تعلم الطلاب ومطابقته للمعايير المطلوبة						
	اشراك العاملين						
1	الجامعة تشجع العاملين على اقتراح افكار جديدة لتحسين الجودة						
2	الجامعة تشرك اعضاء هيئة التدريس في ايجاد الحلول المناسبة للمشاكل التي تواجه اقسامهم						
3	مسئوليات العمل يتم تفويضها للعاملين						
4	تدفع الادارة العليا عملية اتخاذ القرار الى ادنى مستوى لتشجيع الموظفين على صنع القرارات						
5	الموظفون يشعرون بانهم حقا اهم موارد الجامعة						
6	الموظفون يشاركون في حل المشاكل التي تواجه اعمالهم						
	الهياكل والنظم						

1	الجامعة تعتقد انه من الضروري تبادل المعلومات بين الاقسام وبين الموظفين انفسهم					
2	النظام المعمول به بالجامعة يمكن الجامعة من معرفة احتياجات الموظفين والطلبة من خلال قنوات الاتصال					
3	هناك تعريف واضح ومحدد للائحة المهام التي يتعين على الموظفين القيام بها					
4	الاهذاف طويلة الاجل تبنى على متطلبات الطلاب واصحاب المصلحة في عمل الجامعة					
5	نظام الاتصالات الفعال بالجامعة بضمن تدفق المعلومات عموديا وافقيا ومن الاعلى الى الاسفل والعكس					
6	هناك انصال مستمر بين الادارات واعضاء هيئة التدريس والموظفين من خلال الاجتماعات					
7	للجامعة اجراءات واضحة لمكافاة وعقوبة الموظفين ويتم تطبيقها بشفافية					
الاوضاع المالية						
1	تعتبر الموارد المالية المتاحة للجامعة كافية مقارنة بعدد الطلاب					
2	تعتبر الموارد المالية المتاحة للجامعة كافية لدعم الانشطة العلمية للجامعة					
3	الموارد المالية المتاحة للجامعة تعتبر كافية للقيام بتدريب الموظفين على انشطة الجودة الشاملة					
4	هناك استقلال في الموارد المالية للجامعة بما يضمن انفاق الاموال وفقا لاحتياجات واولويات الجامعة					
5	الموارد المالية المتاحة للجامعة كافية لتوفير احتياجات الجامعة من مجلات وكتب ومراجع					
6	يتم تخصيص الموارد المالية الكافية للانفاق على الجهود المبذولة لتحسين الجودة					
7	هناك دعم مالي من الجامعة يغطي جميع احتباجات البحث العلمي					
8	الجامعة تستخدم الاموال المتاحة لها الاستخدام الامثل وفقا للاحتياجات الفعلية وبما يضمن تعزيز الجودة					
الاوضاع الاكاديمية						
1	عدد اعضاء هيئة التدريس يعتبر كافيا بالمقارنة باعداد الطلاب بالجامعة					
2	الجامعة توفر الفرص لاعضاء هيئة التدريس للمشاركة في المؤتمرات والندوات العلمية					
3	الجامعة توفر الخدمات اللازمة لاعضاء هيئة التدريس مثل الاقامة والتامين الطبي وغيرها					

4	يتم تعيين اعضاء هيئة التدريس وفقا للمهارات الاكاديمية ووفقا لاحتياجات الجامعة					
5	يتم اختيار اعضاء التدريس بالجامعة وفقا لنظام قبول مبني على الاسس العلمية					
6	تقوم الجامعة دوريا بمراجعة المناهج العلمية لتلبية احتياجات المجتمع ومواكبة التطورات الحديثة					
7	يستند نظام القبول بالجامعة على نتائج اختبارات القبول واحتياجات سوق العمل والقدرة الاستيعابية للجامعة					
8	هناك تعاون بين مركز البحوث بالجامعة وباقي القطاعات الاخرى					

اعزائي المشاركين

انا طالب دراسات عليا (دكتوراة) في جامعة كوفنتري اقوم باجراء دراسة حول ادارة الجودة الشاملة في التعليم العالي يليبيا تحت عنوان (ادارة الجودة الشاملة كاداة لتحسين جودة التعليم العالي في ليبيا) . تم تصميم الاستبيان الحالي والذي يحتوي على مجموعة من الاسئلة التي ستستخدم في اغراض البحث العلمي وستعامل بسرية تامة .

الرحاء الاجابة على هذه الاسئلة بكل دقة حتي يمكن الحصول على نتائج يمكن الاعتماد عليها

علما بان الاسئلة من 25- 30 دقيقة

اقدر لكم تعاونكم والذي سيساهم في نجاح هذه الرسالة

لاي استفسار يرجي الاتصال على العنوان التالي

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ابوالقاسم علي الربو

جامعة كوفنتري

الرجاء الاجابة على جميع الاسئلة باختيار الاجابة المناسبة من:

(1) لااوافق بشدة (2) لااوافق (3) لادري (4) اوافق (5) اوافق بشدة

	الملموسية	1	2	3	4	5
1	يجب على الجامعات الممتازة ان يكون لديها معدات حدبثة وذات					
2	يجب على الموظفين واعضاء هيئة التدريس في الجامعات الممتازة الظهور بمظهر انيق					
3	المواد المرتبطة بالخدمات المقدمة للطلاب لديها مظهر ممتاز ينال اعجاب الطلبة					
	الاعتمادية					
1	عندما توعد الجامعات الممتازة وعود فانها تلتزم بها					
2	تتعاطف ادارة الجامعة مع الطلبة في حل المشاكل التي تواجههم					
3	تؤدي الجامعة اعمالها بطريقة صحيحة من المرة الاولى ولاتحتاج الى اعادتها					
	المسئولية					
1	الجامعات الممتازة تكون قادرة على اعلام الطلبة عن الاوقات التي تكون فيها قادرة على نلبية احتياجات الطلبة					
2	الموظفين واعضاء هيئة التدريس بالجامعات الممتازة يتواجدون في مكاتبهم اثناء نقديم الخدمات					
3	الموظفين واعضاء هيئة التدريس بالجامعات الممتازة لديهم القدرة على مساعدة الطلاب					
4	الموظفين واعضاء هيئة التدريس بالجامعات الممتازة لديهم المعلومات التي من شانها ازالة اي غموض لدى الطلبة					
	الامان					
1	سلوك الموظفين واعضاء هيئة التدريس بالجامعات الممتازة يغرس الثقة في الطلاب					
2	يشعر الطلاب بالامان عند التعامل مع الجامعات الممتازة					
3	العاملين واعضاء هيئة التدريس يتعاملون بكل احترام مع الطلبة					
4	العاملين واعضاء هيئة التدريس بالجامعات الممتازة لديهم المعرفة اللازمة للاجابة على اسئلة الطلبة					
	التعاطف الاجتماعي					
1	الجامعات الممتازة لديها ساهات عمل مناسبة لجميع الطلبة					
2	الجامعات الممتازة لديها اعضاء هيئة ندريس وموظفين يولون اهتماما خاصا لكل طالب					
3	الجامعات الممتازة تعرف جيدا احنياجات طلابها					
4	العاملين واعضاء هيئة التدريس بالجامعات الممتازة يركزون على تقديم افضل الخدمات للطلاب					

	الـمـلمو سـ ية	1	2	3	4	5
1	لجامعة الفاتح / اكاديمية الدراسات العليا معدات حدبثة وذات مظهر ممتاز					
2	الموظفين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا يظهورن بمظهر انيق					
3	المواد المرتبطة بالخدمات المقدمة للطلاب لديها مظهر ممتاز ينال اعجاب الطلبة في الجامعة					
	الاعتمادية					
4	عندما توعد جامعة الفاتح / اكاديمية الدراسات العليا وعود فانها تلتزم بها					
5	تتعاطف ادارة جامعة الفاتح / اكاديمية الدراسات العليا مع الطلبة في حل المشاكل التي تواجههم					
6	تؤدي جامعة الفاتح / اكاديمية الدراسات العليا اعمالها بطريقة صحيحة من المرة الاولى ولاتحتاج الى اعادتها					
	المسئولية					
7	جامعة الفاتح / اكاديمية الدراسات العليا قادرة على اعلام الطلبة عن الاوقات التي تكون فيها قادرة على نلبية احتياجات الطلبة					
8	الموظفين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا يتواجدون في مكاتبهم اثناء نقديم الخدمات					
9	الموظفين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا لديهم القدرة على مساعدة الطلاب					
10	الموظفين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا لديهم المعلومات التي من شانها ازالة اي غموض لدى الطلبة					
	الامان					
11	سلوك الموظفين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا يغرس الثقة في الطلاب					
12	يشعر الطلاب بالامان عند التعامل مع جامعة الفاتح / اكاديمية الدراسات العليا					
13	العاملين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا يتعاملون بكل احترام مع الطلبة					
14	العاملين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا لديهم المعرفة اللازمة للاجابة على اسئلة الطلبة					
	التعاطف الاجتماعي					
15	جامعة الفاتح / اكاديمية الدراسات العليا لديها ساهات عمل مناسبة لجميع الطلبة					
16	جامعة الفاتح / اكاديمية الدراسات العليا لديها اعضاء هيئة ندريس وموظفين يولون اهتماما خاصا لكل طالب					
17	جامعة الفاتح / اكاديمية الدراسات العليا تعرف جيدا احنياجات طلابها					
18	العاملين واعضاء هيئة التدريس بجامعة الفاتح / اكاديمية الدراسات العليا يركزون على تقديم افضل الخدمات					

Appendix F Jouran' Six steps for problem solving

No	Steps	Activities
1	Identified the project	Normal project s- Evaluate projects- Select a project- Ask; "is it quality improvement"- Prepare a mission statement.
2	Establish the project	Select a team- Verify the mission – Analysis symptoms
3	Diagnose the cause	Confirm/ modify mission- Formulate theories-Test theories-Identify root cause (s)- Identify alternatives
4	Remade the cause	Design remade - Design control- Design for culture – Prove effectiveness – Design effective control
5	Hold the Gains Replicate and nominate	•Foolproof the remade- Audit the controls- Replicate the results
6	Replicate and nominate	Nominate the new project

Source: James, (1996).

Appendix G Crosby 14 principles of quality

Management commitment	Top-level view on quality shown to all employees.
The quality improvement team	To pursue the quality regime throughout the business.
Quality measurement	Analysis of business quality performance in a meaningful manner
The cost of quality	Make sure everyone in the business understands the need for a quality system, and the costs to the business if there is no quality system in place.
Quality awareness	Again make everyone in the business aware of the impact of quality systems.
Corrective action	Ensure a system is in place for analyzing defects in the system and applying simple cause and effect analysis, to prevent re-occurrence.
Zero defects planning	Look for business activities to which zero defect logic should be applied
Supervisor training	Get your supervisors trained in both quality logic and zero defect appreciation which they can apply to their business activities.
Zero defect day	A quality event by which all members of the effected section become aware that a change has taken place.
Goal setting	Once a change has been implemented in a section of the business, the next step is to get the employees and supervisors in that section to set goals for improvement to bring about continuous improvement.
Error cause removal	Communication process by which management are made aware that set goals are difficult to achieve in order for either the goals to be reset or help given by management to achieve the goals.
Recognition	Management must recognize the employees who participate in the quality schemes
Quality councils	Using both specialist knowledge and employee experiences to bring about a focused approach to business quality regime.
Do it over again	Continuous improvement means starting from the beginning again and again.

Sources (*www.free****quality****.org/documents/.../****Crosby's****%2014%20****Steps****.pptx)***

Appendix H National frameworks and its CSFs

No	Framework Name	Abbreviation used	Top management	Continues improvement	Education &Training	stockholders	Employee involvement	Structure & System
1	Malcolm Baldrige National Quality Award	MBNQA	✓	✓	✓	✓	✓	✓
2	Deming Prize	DP	✓		✓		✓	
3	European Foundation for Quality Management	EFQM	✓	✓	✓	✓	✓	✓
4	Rajiv Gandhi National Quality Award	RGNQA	✓		✓		✓	
5	Japan Quality Award	JQA	✓		✓	✓	✓	✓
6	South African Excellence Award	GPNQA	✓	✓	✓		✓	✓
7	Austrlian Business Excellence Award	ABEA	✓		✓	✓	✓	✓
8	German Quality Award	GQA	✓		✓		✓	✓
9	Dubai Quality Award	DQA	✓		✓		✓	✓