# QUALITY MANAGEMENT OF EDUCATION IN ETHIOPIAN PUBLIC UNIVERSITIES

by

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In

**EDUCATION MANAGEMENT**

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Biruk Solomon Haile

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# List of Abbreviations

b/n= between

CGPA= Cumulative Grade Point Average

Custm= Customers

Df= Degree of freedom

EFQM= European Foundation for Quality Management

Et al= and others

HDP= Higher Diploma Programs

HE= Higher Education

HERQA= Higher Education Relevance and Quality Agency

Ident= Identification

ISO= International Organization for Standardization

MOE= Ministry of Education

N= Number

PDCA= Plan- Do- Check- Act

PDSA= Plan- Do- Study- Act

QE= Quality of Education

QM= Quality Management

SERVQUAL= Service Quality

SPSS= Statistical Package for Social Sciences

TQM= Total Quality Management

Vs.= Versus  = Related with

&= and

***Abstract***

*Quality management of higher education is a vital concern today. The purpose of this study was to examine education quality management practices of Ethiopian public universities and to investigate a relationship between three dependent variables (planning for quality education, implementation of plans and performance improvement) and five independent variables (identification of quality education, considering customers' needs, performance tracking, education quality management strategies and taking actions). Both quantitative and qualitative data were collected by means of questionnaires and interviews. Respondents of the questionnaire items were 170 education managers and student union representatives. In addition, ten senior instructors and ten senior students were interviewed. The responses obtained using questionnaires were analysed using frequencies, percentages, means, modes, chi-square tests and Spearman's correlation. Responses obtained using open ended items on the questionnaires and interview responses were analysed qualitatively using themes of issues most frequently obtained. This study showed that: in most Ethiopian public universities the educational quality planning process is not participatory. There is a gap in using their plans in guiding their day to day activities. Most universities do not regularly collect data on satisfaction levels of their customers. Educational process changes are not tested on small scale before a wide spread application. It also showed that there is a strong positive relationship between performance improvement and the four independent variables namely: considering customers' needs, performance tracking, teaching methodologies and taking actions in Ethiopian public universities. Consequently, recommendations have been given so as to improve education quality management practices of Ethiopian public universities. This study hopefully contributes a lot for performance improvement of similar higher education system.*

*Key words:*

*Quality; management; education; universities; planning; performance; improvement; quality assurance; higher education; educational management*

# Chapter One

## 1. Introduction

### 1.1 Introduction to the Study

Quality has always been of central interest in higher education. According to Giertz, "Quality can be seen as the trade mark of higher education; without quality, there is no higher education"(Giertz 2000:5). This is to mean that all higher education institutions should provide quality education. However, this may not be possible in all institutions due to difference in quality management practices including planning procedures, implementation of plans, tracking performances and strategies followed to provide quality education. Moreover, it is difficult to manage educational quality if we don't know what we are looking for.

"Quality" is simply a hurrah word, used to indicate that organiztions have found something good. To say that something is good - whether just good enough (that is as per the standards) or extremely good (excellence) - is an empty and meaningless statement as long as one cannot say 'good' in what way or on what grounds. Managers need to specify the criteria they use to make judgements about quality (Giertz 2000; Mishra 2007). Many definitions of quality education exist; different stakeholders have different meanings for quality education (Adams 1993). Confirming to the complexity and multifaceted nature of the concept, it can be operationally defined as "education that enables students to fulfil customers'/stakeholders' requirements and measured by the students' academic performances/examination results". Moreover, to manage educational quality, it is important to identify indicators used to judge quality. Managing factors that influence these quality indicators in turn will help to manage education quality.

Higher education environments across the globe are frequently described as turbulent and dynamic. Both global and national forces are driving change within and across individual countries and their higher education institutions. These changes have served to put the issue of quality management firmly on the agendas of national governments, institutions, academic departments and individual programmes of study. Despite the progress that has been made

through research and debate, there is still no universal consensus on how best to manage quality within higher education. One of the key reasons for this is the recognition that quality is a complex and multi-faceted construct, particularly in higher education environments (Cheng & Tam 1997; Becket & Brookes 2006; Qin Su 2015).

Provision of quality education is an essential means to achieve optimal development for a nation. The Ethiopian education and training policy and consecutive education sector development programs (Education Sector Development Program I and Education Sector Development Program II) have made significant efforts to create access to education for many children of school age (Ministry Of Education (MOE) 1994; MOE 1999 and MOE, 2002). Consequently, primary school enrolment has increased dramatically (MOE 2010). This has also increased the enrolment rates at secondary and tertiary education levels. The student-teacher ratio, student textbook ratio, student classroom ratio and the provision of qualified teachers have become problems (MOE 2007). That is, managing quality of education has been challenged. Offering quality education depends on input factors like teachers' effectiveness and institutional facilities. According to the reviewed literature, provision of quality education depends, to a large extent, on the quality of its teachers (Schetman & Goodfried 1993; MOE 1994; Fredriksson 2004; Colby 2000).

Other than teachers' effectiveness, managing quality of institutional facilities also affects the quality of education. According to MOE (2005) and Berhanu (2009) students cannot work effectively in classrooms if institutional equipment and furniture are available in limited quantity. That is why the Ethiopian education and training policy gives emphasis to the supply, distribution and utilization of educational materials as well as educational technology and facilities to promote quality education (MOE 1994). In addition, it indicates those inadequate facilities, inadequate training of teachers, overcrowded classrooms, shortage of books and other teaching materials to be factors that can lead to low quality education provided (MOE 1994). Managing and improving quality of these factors can yield to provision of higher quality education.

Ethiopian Ministry of Education has intervened to manage quality of higher education by providing further education opportunities for instructors, purchasing and supplying educational facilities and assigning institutional responsibility to assure the relevance and quality of higher

education for higher education relevance and quality assurance agency. This is because of the fact that provision of quality higher education is a vital condition to produce the intended skilled human power. Since students are expected to apply what they have learned in their field of study in real world of work, managing quality of higher education is crucial.

Managing quality of higher education also helps to increase productivity. Moreover, the government, potential students, employers, parents and other concerned stakeholders should have information concerning the quality of education provided in higher education institutions (Yizengaw 2003). This will be made possible if there are research outputs that have been undertaken on education quality management. Besides, if there are research outputs on quality management of education in higher education institutions, the stakeholders such as instructors, students, deans and other concerned bodies will use methods recommended by researchers to manage and improve the situations. But, as far as the current researcher knows, there are no researches conducted on quality management of education in Ethiopian public universities. The study made by Mulu (2012) on quality and quality assurance in Ethiopian higher education did not address the issues that have to be addressed in quality management as cited by Edward Deming, the quality guru, which the current researcher raised in his research questions (Mulu 2012; Russel & Taylor 2006). In addition, it seems that there are no clear strategies used to manage educational quality in Ethiopian public universities. Therefore, this study investigates quality management of education in Ethiopian public universities as viewed by education managers (deans or directors, departmental heads) and students.

## 1.2 Statement of the Problem

The Government of Federal Democratic Republic of Ethiopia has 31 public universities and a fast increasing number of private higher education institutions. The Ethiopian government is now paying attention to issues of quality at higher education level (Materu 2007; Mulu 2012). The country is becoming conscious of the need for effective quality planning and implementation of the plans for quality improvement.

The need to improve quality of higher education institutions, the need to reassure the public about quality of education provided and the importance of ensuring that education offered in higher education meets acceptable local and international standard will be made possible if research is undertaken on status of quality management of education in higher education institutions. Those concerns, together with the need to collect data on educational quality factors so that policy decisions regarding higher education can be based on evidence and systems followed to manage educational quality can be repeated in other educational institutions. Until recently, there is scarcity of research on quality management of higher education in Ethiopia. The studies which exist mostly describe the quality of primary education system or part of the system in terms of 'input' into the teaching learning process (teachers, equipment, materials, etc.) or look at student achievement in relation to numeracy and literacy (Derebssa 2011). The aim of this study is, therefore, to fill the knowledge gap in this area in higher education institutions.

Many instructors in higher education institutions in Ethiopia claim that students' performances are declining from time to time (Ayalew, Dawit, Tesfaye & Yalew 2009). It also seems that there are no quality management strategies commonly followed by these institutions. Moreover, there are no research outputs undertaken on quality management of educational processes in higher education institutions in Ethiopia. As a result the topic of this research and recommendations to be forwarded are timely solutions to the existing problems.

Provision of quality higher education is the base for the nation's development. But in Ethiopia provision of quality higher education seems difficult. Several factors contribute to the decline in quality of higher education. According to Materu (2007) these may include budget limitations, rapidly rising enrolments, and insufficient numbers of qualified academic staff in higher education institutions, retirements, HIV/AIDS and poor governance. In addition to resource limitations, poor planning procedures for quality education, inadequate implementation of plans, insufficient performance tracking techniques and absence of well documented quality management strategies are the main causes for poor education quality management practices (Csizmadia 2006). But the status of these issues was not studied in Ethiopian public universities. Therefore, the current study is focussing to address this gap.

As already mentioned, the Ethiopian government assigns institutional responsibility for higher education relevance and quality assurance agency to manage quality in higher education. This institution works at its best to attain its objectives. In addition to this institutional responsibility, university members themselves have to do their part towards investigating the current practices of quality management of education in their institutions and to improve quality management practices accordingly. That is why the current researcher wants to investigate quality management of education in Ethiopian public universities. To this end, the study aims to address the following basic questions.

**Main Research Question**

- What are the practices of quality management of education in Ethiopian public universities?

**Sub Research Questions**

1.What procedures do Ethiopian public universities follow to plan for quality education?

2. How do Ethiopian public universities implement the quality education plans?

3. How do the Ethiopian public universities know that they provide quality education?

4. What strategies are available for quality management of education in Ethiopian public universities?

5. Why do these universities use their current strategies to manage quality of education?

6. Is there a strong positive relationship between the three dependent variables (planning for quality education, implementation of plans and performance improvement) and the five independent variables (identification of quality education, considering customers' needs, performance tracking, strategies of education quality management and taking actions) of education quality management?

7. What are the strengths and weaknesses of the current quality management practices in Ethiopian public universities?

**Hypotheses of the Study**

1.H0: There is no strong relationship between identification of quality education and planning for quality education

2. Ho: There is no strong relationship between identification of quality education and performance improvement.

3. Ho: There is no strong relationship between considering customers' needs and institutional planning for quality education.

4. Ho: There is no strong relationship between considering customers' needs and performance improvement.

5. Ho: There is no strong relationship between performance tracking and implementation of plans.

6. Ho: There is no strong relationship between performance tracking and performance improvement.

7. Ho: There is no strong relationship between quality management strategies and implementation of plans.

8. Ho: There is no strong relationship between quality management strategies and performance improvement.

9. Ho: There is no strong relationship between taking actions and the implementation of plans.

10. Ho: There is no strong relationship between taking actions and performance improvement.

## 1.3 Aim and Objectives of the Study

The aim of this study is to describe and evaluate practices of education quality management in Ethiopian public universities. The investigation was accomplished by compiling views of education managers (deans or directors, departmental heads) and students in Ethiopian public universities and through reviewing literature in the area.

More specifically, the objectives of this study are:

1. To examine the actual procedures followed to plan for quality education in Ethiopian public universities.
2. To investigate how plans for quality education are being implemented in Ethiopian public universities.
3. To look into how the Ethiopian public universities track their performances to manage quality of education.
4. To investigate strategies available for quality management of education in Ethiopian public Universities.
5. To find out reasons why these universities use their current strategies to manage quality of education.
6. To investigate the relationship between the three dependent variables (planning for quality education, implementation of plan and performance improvement) and the five independent variables (identification of quality education, considering customers' needs, performance tracking, strategies of education quality management and taking actions).
7. To identify and evaluate strengths and weaknesses of the current quality management practices in Ethiopian public Universities.

**1. 4 Significance of the Study**

These days, the issue of education quality management is topical. But there is no research conducted on the practices of quality management of higher education institutions in Ethiopia (Yizengaw 2003). More importantly the quality management of education in relation to planning for quality education, implementation of educational quality plans, tracking their performance to improve quality and strategies available for quality management are not addressed. Therefore, this study is going to fill the gap by collecting and analysing views of education managers (deans or directors, departmental heads) and students in Ethiopian public universities and reviewing experiences of other institutions as made through related literature

review. The current researcher's experience of teaching in business and economics faculty at Bahir Dar University for about eight years has motivated him to investigate quality management of education to contribute to the solutions of the existing real problems in this area. In general, this study is believed to have the following significances:

- The study will create an awareness of the status of education quality management practices in Ethiopian public universities.
- Through analysing the strengths and weaknesses of universities and making recommendations, the study will contribute to improve the current education quality management practices.
- Through documenting experiences of different higher education institutions, the study will help to improve education quality management practices in Ethiopian public universities.
- The study will help education managers, instructors and policy makers to take remedial actions to improve education quality management.
- The students who are the recipients of education quality management will also benefit a lot from the study of this magnitude. If quality management of education is improved in an institution, students will be more satisfied from that institution through quality education that they will get.
- Other researchers may use the research results as a springboard for further investigations that will lead to improvement of education quality management in other educational settings.

## 1.5 Limitations of the Study

The researcher understands that the following are limitations of the study:

First, the researcher considered only the undergraduate regular programs' education quality management practices, other programs like distance and open learning, summer, extension and graduate programs were not considered.

Second, from the three core activities of a university: teaching-learning, research and community services the last two core activities were not considered.

Third, most interviewees were not willing to be recorded during interviews therefore the researcher took only notes on their interview responses. As a result there might be loss of some important information.

Forth, the researcher excluded some groups of staff members in the sampled universities. He included only education managers (deans or directors and departmental heads) and student union representatives. However, ten selected senior instructors and ten selected senior students were included in the interview held for this study. But if other instructors, other students and employers of graduates included, they might have different views. Therefore, different findings might be obtained from these groups as compared to the current findings.

## 1.6 Delimitations of the Study

This research would have been more comprehensive and conclusive if it had been carried out by considering views of education managers, instructors, students, employers and other stakeholders. However, it is limited to the investigation of quality management of education by considering views of education managers (deans or directors, departmental heads) and students in Ethiopian public universities. It also does not consider other core issues in Ethiopian public universities like research and community service for the sake of clarity, manageability and in depth analysis. Furthermore, the study is delimited to undergraduate regular degree programs quality management practices as viewed by selected education managers and students in Ethiopian public universities. This delimitation is made because the research would not be manageable if views of all stakeholders in all universities and all programs in these universities were included.

## 1.7 Definition of Terms

**Education Managers:** are individuals in the position of departmental heads or course chair persons and above such as program managers, vice deans, deans/directors, university vice presidents and presidents. In this study the term education managers refer to deans/directors and departmental heads of Ethiopian public universities.

**Instructors:** are university teachers from the position of graduate assistant I to professors teaching in Universities.

**Public Universities:** are degrees granting universities financed by the Ethiopian government budget under Ethiopian ministry of education (MOE).

**Quality Education:** education that enables students' knowledge, attitude and skill to fulfil their customers' requirements as measured by students' academic performances (examination results).

**Quality Management:** the management practices and activities of education managers (deans or directors and departmental heads) to assure and improve educational quality.

## 1.8 Organization of the Study

The report of this research has five chapters. The first chapter deals with introduction to the study, statement of the problem, aim and objectives of the study, significance of the study, limitations of the study, delimitations of the study, definition of key terms and organization of the study.

The second chapter will review literature related to the study. Chapter three will deal with research methodology; chapter four will present and analyse the collected data, and chapter five will deal with interpretations of major findings, conclusions and recommendations. Then references will be acknowledged by using the Harvard referencing style and at the end appendices will be attached.

# Chapter Two

## 2. Review of Related Literature on Quality Management of Education

### 2.1 Introduction

This chapter deals with review of related literature. The chapter has two parts. Part one is about conceptual considerations of quality management. It defines and explains the various concepts and issues related to quality and quality management in general and education quality management in particular. It comprises exploration of scholarly literature related to the topic and research questions of this study. Part two of this chapter is about quality management frameworks. In this part, the researcher will discuss the quality management framework that he has used to guide the current study.

## Part One: Conceptual Consideration of Quality Management

### 2.2 Concepts of Quality

Many people talk about 'quality'. But to define what exactly quality is about is very difficult. Giertz, states that:

> "*To define what is meant by quality is easier said than done. Everyone who has tried knows that it is difficult to catch its full meaning in a few words or a short description - or even to give any satisfactory description at all. And the more we try, the more frustrating it gets. It is trouble-free to agree with Pirsig and ask 'what the hell is quality?"* (Pirsig 1974, cited in Giertz 2000:3).

If people define quality based on their own perceptions and compare it with others' definitions, they will find that perceptions vary. This difference might be because of the following reasons:
Firstly, quality has many features and can be viewed from many viewpoints. One can never wrap them all. A selection has to be made and that selection is all the time based on beliefs- sometimes individual beliefs, but often beliefs shared by a group of stakeholders. Besides academics, there are many diverse stakeholders of higher education that want to have their input in deciding what quality is in higher education. And these are composed of: students, parents, future employers, the state and funding bodies (Barnett 1992; Staropoli 1991). These stakeholders have shifting interests and give main concerns to diverse aspects. Therefore, it is difficult to address all these diverse concerns.

Secondly, higher education as such is not as similar as it was. This means that we might be referring to diverse types of performances when we talk about higher education. Following the in progress expansion and diversification of higher education, there are many different types of higher education institutions. An important difference is that purposes vary. If quality is seen as "fitness for purpose" (Ball 1985) what is considered as quality will vary too. We can no longer be sure that the higher education we know and on which we base our notion of quality is the same kind of performance that others refer to when they talk about quality in higher education – our implicit knowledge might not be the same as the implicit knowledge of other people. Therefore, it is always important to be clear about "quality where and for what. The most important concern here is that it is important to express and clarify perceptions of quality so that different beliefs and reference points become noticeable and can be discussed" (Giertz 2000:3).

The following explanations are made to understand concepts of quality that are used in quality management in business and industry context. These various definitions of quality are also important to understand the term quality in education quality management.

**Continuous Improvement:** If an institution or organisation can maintain continuous improvement, that institution or organisation is considered as of acceptable quality institution (Deming 1986 cited in Bogue 1998).

**Fitness for Use:** Services or goods are regarded as of acceptable quality when they satisfy the expectations of the customers (Guaspari 1985 cited in Bogue 1998).

**Conformance to Specifications (Standards):** When services or goods meet set specifications or threshold standards, that service or goods is regarded as of acceptable quality (Crosby 1984). This concept of quality develops from quality control in the manufacturing business. In this approach, the quality of goods or services is measured as to whether it meets the standards set, being rejected if it does not conform (Green 1994; Harvey 2002).

**Consideration of Multi-aspects:** An organisation or institution needs to consider not only fitness for use or conformance to specifications but also reliability, durability, aesthetics and so on. It must comprise diverse characteristics and goals, the procedures employed for achieving those goals and how the goals are achieved (Garvin 1988 cited in Bogue 1998). With respect to the production of goods such as cars or furniture, the definition of quality may be straightforward, and there is no confusion in its meaning. However, there is no a clear-cut meaning of quality in higher education as there are diverse stakeholders involved in the discussion of quality in higher education (Bogue 1998).

For instance, European higher education institutions were disinclined to define quality in higher education since they saw quality as context dependent, which changes from time to time (Brown 2004; Harvey 2005; Lim 2001; Lomas 2002; Sanyal & Martin 2007). Rath (2010) demonstrated that regardless of different arguments about the concept of quality, it is possible to categorise a wide range of concepts of quality in higher education as discussed below:

**Quality as Exceptional 'Excellence':** Green calls this concept the traditional concept of quality. When people talk about promoting quality, they frequently mean promoting excellence. However, quality is not the same as being excellent. Every university or college, of course, tries its best to deliver its programs with quality, not to aim for excellence because it needs to focus on mass education and not only the elite education. This definition, promoting excellence, applies more to higher education delivered by elite institutions (Green 1994). He

argues that institutions that have focused on the mass system of higher education are perceived as somehow of lower quality, where 'more means worse', and these universities see quality as 'fitness for purpose' (Lomas 2002). Nevertheless, Green argues that the 'excellence' approach to quality is resource consuming, and it is not of much value when the quality of the whole institution is assessed (Green 1994).

**Quality as Fitness for Purpose:** This approach requires the institution to focus on what is needed to achieve the stated purpose or mission of the institution. There must be a match between stated goals and their achievement. An institution that can achieve its set goals and missions is regarded as a quality organisation (Green 1994; Williams & Cappuccini-Ansfield 2007).

Some governments and most higher education institutions are in favour of the fitness for purpose approach; for example, the Australian Universities Quality Agency and the Ethiopian higher education relevance and quality agency audit the quality of an institution based on the purpose or mission of that institution. An institution is perceived as successful when its purpose or mission is set on the basis of the context and time because quality is context dependent, evolving over time (Lim 2001; HERQA 2006). The quality assurance agencies' subject review approach and the ISO 9000 series quality assurance procedures are based on the concept of fitness for purpose (Lomas 2002).

According to a survey of senior managers (pro-vice-chancellors, vice principals, deans and academic registrars) in a wide range of universities in the UK, fitness for purpose was the approach to quality that got the most support, closely followed by transformation. Exceptional performance (excellence) and value for money got far lower support and the latter was the least popular approach (Lomas 2002).

However, the key question is how do we know our product or service fits the purpose? Who is to define the purpose? – Educators, students, employers, governments, or the public? It is a waste of time trying to specify the purpose of higher education. So the purpose is in the eyes of the beholder. This is to mean that interpreting it is the role of the user (Harvey & Newton

2007). Harvey and Newton stress that ‘’fitness for purpose is intrinsically linked as a definition of quality with the accountability approach to quality assurance’’ (Harvey & Newton 2007: 235).

Similarly, Green states that it is not easy to define the purpose of higher education because there are diverse stakeholders involved in discussions in relation to quality issues in higher education (Green 1994). “Who should define the purposes of higher education? Should it be the government, the students, the employers of students, the managers of institutions or the academic professionals?” (Green 1994: 12).

**Quality as Value for Money:** This notion has its focus on efficiency in the use of public resources, and accountability to political authorities. This concept is popular and is often supported by governments because it is responsive to accountability. In higher education, efficiency in the use of resources needs to be considered in order to meet objectives and purposes set by an institution (Lomas 2002). However, a value for money approach is more likely to undermine professional autonomy and academic freedom because in order to achieve value for money there will be imposition from government via funding agencies and quality assurance agencies (McNay 1995). Value for money approach shifts higher education institutions from a collegial tradition to a managerial enterprise. It also more likely weakens the traditional concept of collegiality and self-regulation (Lomas 2002).

**Satisfaction of the Client:** The perception of the student as a consumer in higher education is on the rise, meaning that an institution is perceived as being of acceptable quality when it meets the expectations of the consumer. Deming argued “the difficulty in defining quality is to translate future needs of the user into measurable characteristics so that a product can be designed to give satisfaction at a price that the user will pay” (Deming 1982 cited in Green 1994:26). It is difficult however to stipulate who is the customer in higher education as there are many kinds of customers in higher education, including students, governments, employers, and the like (Green 1994).

It is simple to identify the needs of students in universities and colleges such as library facilities, study materials, student housing, and other physical facilities. It is difficult however to identify the quality of education service because it is intangible. The quality of products of the manufacturing industry, for example cars, is physically tangible. Thus, there is a need to ask a question whether students know exactly what they need (Green 1994). "They may be able to identify their short-term needs, but do they have enough knowledge and experience to know what they need in the long term? Are they in a position to judge whether their needs are being met?" (Green 1994: 27).

**Quality as Value Added**: This concept refers to the value added to students during their study and training. It is the means of devising learning outcomes and realising the outcomes in the graduates. The basic quality question is what has he/she learnt? This concept is relevant to current trends of higher education moving from elite education toward mass education where the process of value adding is itself emphasised rather than the measurement of value adding from an already high level (Bogue 1998).

Within this approach, an institution needs to respond to the critical question, relating to what difference it makes in enhancing student's skills, knowledge, attitudes, or other attributes while they are studying or training (Bogue 1998). Student's knowledge, skill, and attitude are accumulated over time through lifelong learning process (Harvey 2002). Value added is a difference in a student's attainment between the commencements of studies to when he/she has graduated. Measuring the value added abilities of a student requires an institution to conduct pre-assessments of the student when he/she begins a program and post-assessment of the student when he/she finishes his/her education (Bennett 2001).

Bennet (2001) demonstrated that despite the fact that value added is broadly accepted as a sound approach to quality in higher education, it has been less likely to be used as a measure for assessing a university's quality and performance, for several reasons: first, value has many dimensions, so institutions need to develop many different measures; second, institutions are intended to create the same kinds of value added for all students, but institutions are contextually different; third, institutions have different missions; fourth, it might take

institutions many years to identify the outcomes, so it is recommended that an institution should assess facets of value added with alumni rather than with graduating students. A value added approach is more likely to be multifaceted and costly (Bennet 2001). Similarly, Harvey and Green argued that quality should be investigated in terms of a wide array of aspects contributing to a notion of value added (Harvey & Green 1993).

**Quality as a Standard:** In this respect, quality is seen as meeting threshold requirements. Specific standards and norms are defined; a threshold is established that the university should cross in order to certify that it meets the quality standard. This concept of quality often forms the basis for accreditation decisions. This approach to quality is fashionable in the public services (Green 1994). The fulfilment of the standards does not motivate innovations. It implies that once the standards have been established, there is no need for the quality to be reconsidered (Lomas 2002). However, services and products, in fact, will need to be modified to satisfy the pace of technological change in society. The use of the term 'standard' is easily measurable and quantifiable, but this does not work well in higher education. Similarly, academic standards are no longer equated with teaching quality (Stubbs 1994).

To show the complex notion of quality in higher education, consider Frazer's example: A number of departments in different universities produce graduates in the same subject at the same level and the standard of achievement of the graduates from each department is the same, but there are different criteria for quality. This is shown as:

> *The perception of the public would probably say that they have different quality criteria. Department A attracts students on entry with the highest-grade students while Department B admits lower grade students. The view of the public is that A is of higher quality than B. But because the achievements of the graduates are the same, it could be argued that B is of higher quality since the 'value added' to its students is much greater. Department C has better qualified staff and better physical facilities than Department D. The public view is that C is of higher quality than D. But C is more costly, and because the achievements of the graduates are the same, D is more efficient. Department E sets up goals of high standards whereas Department F is more modest in its statement of what it intends. The public opinion is that E is of higher quality than F whereas F is more effective than E* (Frazer 1994:110).

Quality is defined differently depending on the stakeholders, meaning that any definition of quality must take into account the views of various stakeholders. For example, government might look first at the pass/fail percentage, the dropout rate and the enrolment time. Quality in the government's eyes might be described "as many students as possible finishing the programme within the scheduled time with an international degree at reduced costs" (Vroeijenstijn 1995: 60). Employers may view quality as the skills and attributes obtained during the studies. Students may consider quality as the concept that helps develop their individual knowledge and position in society. Academics may define quality as knowledge transfer, good academic learning and a good learning environment (Vroeijenstijn 1995).

Correspondingly, diverse stakeholders in higher education have diverse viewpoints on quality. For example, students and lecturers might focus on the process of education whereas employers might emphasise the outputs of higher education. So the approach to quality is not a

unified perception and it is recognised that one institution might excel in one area but might not excel in another (Green 1994).

Green's suggestion with respect to the concept of quality in higher education is stated below:

> *This points to the need for the development of a framework that will clearly show the relationship between the criteria used and the various quality assurance and quality assessment techniques recently available, whether within or outside higher education. This should provide a stronger, more reliable, more credible basis for quality assessment than that which currently exists* (Green 1994: 28).

However, whatever approach is employed for measuring quality in higher education, there will be questions such as:" what do we measure? Excellence for what? What is the value in "value for money?'' and so on (Maassen & Van Vught 1996: 188).

**Quality Is What Customers Perceive:** Too often improving quality is mentioned as an internal goal without explicit references to what is meant by quality. To talk about better quality without defining it, how it is perceived by customers, and how it can be improved and enhanced is of limited value. Very often this is only paying lip service to quality improvement. "In quality literature it is noted that the quality of a particular product or service is whatever the customers perceives it to be" (Gronroos 2007: 73).

There is always a risk that, when quality is defined too narrowly, quality improvement programmes become too narrow in scope. For example, the technical specification of a service or a product is frequently considered the only or the most important feature of the perceived quality. The more technology-oriented the firm is, the bigger this risk tends to be. In reality, customers often perceive quality as a much broader concept and, moreover, features other than technical ones frequently dominate the quality experience. One has to define quality in the same way customers do, otherwise, in quality programmes', the wrong actions may be taken and money and time may be poorly invested. It should always be reminded that what counts is quality as it is perceived by customers (Gronroos 2007). Of the above mentioned approaches,

fitness for purpose, excellence and standards have been the most powerful as they have been used around the world in the establishment of a quality assurance framework in higher education (Bradley 2008).

In sum, there is no single, absolute, agreed or universally accepted definition of the term 'quality', but there exists a range of overlapping interpretations as there are stakeholders who have interest to define it. Therefore, it seems very difficult to give a definition of quality that all experts or stakeholders can agree on. The researcher defined the term quality education as shown in section 1.7 of chapter one. But he does not need to add another definition of quality as in this study he can accept definitions or implicit understandings of quality that are used by different parties in Ethiopian public universities: Whatever they understand by 'quality' is the subject of this study.

## 2.3 Quality Management

In the olden days quality was considered as inexpressible abstraction, but these days it is discussed as something that can be managed and improved (Seymour 1992; Dill 1992; Massy 1997). Management is the art and science, concerned with planning, organizing, leading/directing and controlling the work of human beings towards a common aim. It is about getting things done as quickly, cheaply and effectively as possible- and usually about getting things done through other people (Trow 1994, Zhang, X., Zhong, W., Makino, Sh., 2015). The term quality management in this study also shares these concerns.

The word quality management refers to the policies, systems and processes designed to ensure the maintenance and enhancement of quality within an institution. Quality management is defined as "that aspect of overall management function that determines and implements the quality policy (that is intentions and direction of the organisation)" (ISO 8402 cited in Rath 2010: 26). Thus quality management may be described by concepts, instruments and techniques used in this field (Vught 1996). Quality management is usually thought of, however, as a means to an end, not an end in itself. To be more precise, one should perhaps say that it is potentially a means to multiple ends. These include improving the quality of teaching

and learning, curricula (course contents), student assessments, learning resources, and staff development making the operations of universities more transparent and accountable and improving their performance (Vught 1996).

This is, however, only one possible operationalisation of the concept of quality management because if people do not agree on one definition of quality, this will have consequences on what they think quality management should do. Quality management, in the higher education context, also covers the quality terminology: control, assurance and improvement. It encompasses those processes, "... by which an institution discharges its corporate responsibility for articulating, maintaining and enhancing the academic standards of those activities for which it is responsible" (HEQC 1995: 3) and ensures that these processes are performed efficiently and effectively. Quality management has made issues about academic standards explicit.

Academic standards are those expectations which have been established for students to meet and institutional quality assurance procedures are the means by which institutions can demonstrate to those with an interest in higher education (example: students, employers of graduates and government) whether or not they are meeting those standards and expectations. Quality management also encompasses those external processes which have been developed to account for the public funds they receive. These include the processes operated by the government and its agencies (Rath 2010).

Therefore, one of the contributions of this study to the scientific field and particularly to quality management is to describe and evaluate the quality management practices available in Ethiopian public universities (see more about the objectives of the study in section 1.3). This is only a short introduction of the concept of quality management; the researcher will discuss the models of higher education quality management in more detail in section 2.10.

## 2.4 Input, Process and Output in Education System

### 2.4.1 Educational Input

In planning for educational activities the adequacy and quality of various educational inputs should be taken into account. This educational input refers to human, financial and physical resources that directly or indirectly influence quality of teaching and student leaning. One of these inputs is incoming students which include their number and preparedness. Previous researches have demonstrated that the academic preparation of incoming students is an important foreteller of performances, retention and continuity in college ( Kuh 2007; Astin 1993).

The second input is academic staffs which comprise their sufficiency and their academic status. The issue here is the sufficiency, well qualified and motivated academic staff with the required teaching and research skill (Paskarella & Terenzini 1991 cited in Mulu 2012).

The third is existing resources. Resources include information, financial and physical resources. It is argued that resources in all forms are vital if universities are to provide satisfying and meaningful student learning experience and if quality management is to be more than a buzz phrase (Gift & Bell- Hutchinson 2007; Massy 2003).

### 2.4.2 Educational Processes

The implementation of carefully prepared educational plan results in efficient and effective educational processes. This also requires the empowered engagement of actors in the process. The improved student learning experience is possible in a rigorous learning environment that requires active participation and engagement of all actors (students, teachers and educational leaders) (Prosser & Trigwell 1998). Educational process includes the teaching and learning

process, the curricula, student assessment, staff development, and quality and utilization of learning resources (Gift & Bell-Hutchinson 2007).

### 2.4.3 Educational Outputs

Performance improvement of educational activities can be measured in terms of educational outputs. Quantitative measure of outputs such as completion rates and research publications may be used as indicators of universities performance, but they are not sufficient to show improvement in student learning. Hence, a meaningful quality management process should go beyond quantitative measures of output.

This may include the collection and analysis of data on attrition rate, on student learning experience and achievement or satisfaction on graduate employment and earning (Access Economics PTY Limited 2005).

## 2.5 Managing Quality of Educational Processes

Different stakeholders focus on different segments of education system, some focus on educational inputs; others focus on educational outputs, and still others focus on educational processes. In this study, the researcher focuses on educational processes as an important segment of a given education system. Educational processes are activities in the education system such as teaching and learning, design of course contents (curricula), student assessment (feedback mechanisms), quality and utilization of learning resources, staff development and etc (HERQA 2006). Managing quality of these processes will lead to quality education being provided.

### 2.5.1 Teaching and Learning

Quality of teaching and learning is determined by the competence and commitment of actors in the process. The major actors in teaching and learning process are students and teachers. The competence and commitment of the actors may be determined by the type, amount and quality of their training, their preparedness and their motivation to undertake the activity effectively and efficiently. As specified above, educational input includes the human, financial and physical resources involved in supporting institutional programmes, activities and services. Limitations concerning educational input surround their inability to determine the quality of teaching and learning without extensive interpretation. For example, an indicator such as resource allocation should be interpreted with enrolment data (to determine resource to student ratio), resource quality or condition and conceptual range (example, library book topics) to determine teaching and learning quality (Chalmers 2008). Managing quality of these inputs will help to manage quality of teaching and learning. The appropriateness, variety and level of innovation of teaching methods, practice regarding academic advice and tutorial support, the balance of theory and practice, the extent of evaluation of approaches to teaching and learning and the consequent action are important issues to be considered in managing quality of teaching and learning in an educational process (HERQA 2006).

### 2.5.2 Curricula

Curricula (course contents) are what actually are delivered for students in the teaching and learning process. To manage quality of a curriculum, one has to consider the following issues: the extent of involvement of senior academics in the area, external professionals and employers in curriculum design, evaluation and review processes. The descriptions of program approval, monitoring and review mechanisms are very crucial. Moreover, the extent to which curricula aims and objectives are made explicit to students, the appropriateness of the balance of subject knowledge and transferable skills are important issues to consider in managing quality of a curriculum (HERQA 2006).

### 2.5.3 Student Assessment

Student assessment is a mechanism through which an instructor can identify the level of students' performance on a course. This indicates whether course objectives are met or not. Issues to consider in managing quality of student assessment include: the extent to which the assessment policy and procedures and the criteria to ensure that students are graded fairly and that standards are appropriate and applied consistently, the extent of communication of the assessment policy and procedures, the appropriateness of mechanisms to ensure that assessment methods for each course in each program are balanced. Example: between continuous and end of course, formative and summative, diagnostic and attainment assessment methods. These assessment methods should be applied appropriately and matched to the learning outcomes. The adequacy of the student appeal procedures must be clear (HERQA 2006).

### 2.5.4 Learning Resources

To manage quality of education, availability and utilization of educational facilities are other important inputs that one has to consider: Sufficiency and adequacy of institution's physical facilities (such as classrooms, offices, lecture halls, cafeteria, dormitories, clinic, sport fields etc.) and sufficiency and adequacy of institution's learning resources (such as library; computer centres with appropriate software and hardware, audio-visual equipment; internet access; laboratories; workshops; and so on) are important learning resources to consider. Moreover, resource utilization and mechanisms for maintenance and updating, financial stability of the institution and adequacy of its budget to run and sustain its programs should be considered (HERQA 2006; Juha 2008).

### 2.5.5 Staff Development

In education quality management, managing the staff development processes and practices are very important. To do so the following issues should be considered: Availability of adequate number of qualified academic staff to support programs. Secondly, an appropriate staff-student ratio for each program, the suitability of the teaching staff in terms of the mix of qualifications, experience, full-time/part-time, local/expatriate; and the like should also be taken into consideration. Finally, the existence of suitable, clearly stated, well-established and effectively implemented policies for the appointment and promotion of staff, the operation of a transparent staff appraisal system that identifies the strengths and weaknesses of staff and which leads to action, the provision of pedagogical and other training organized to support staff development should be a priority (Juha 2008).

## 2.6 Quality Planning Procedures

Quality planning provides the process, methods, tools, and techniques for closing customers' expectation and perception gaps and thereby ensuring that the final quality gap is at a minimum. The following bulletins summarize at a high level the basic steps of quality planning.

Basic steps of quality planning are:

- Step 1- Establish the project
- Step 2- Identify the customers
- Step 3- Discover the customer needs
- Step 4 -Develop the product
- Step 5- Develop the process
- Step 6 -Develop the controls and transfer to operations (Juran, Godfrey, Hoogstoel & Schilling 2001)

The remainder of this section will provide the details for each of these steps.

**Step 1: Establish the Project**

This first step provides the clear goals, direction, and infrastructure required if the constituent quality gaps are to be closed. A quality planning project is the organized work needed to prepare an organization to deliver a new or revised product, following the steps associated with quality planning. Generally speaking, the following activities are associated with establishing a quality planning project:

- Identify which projects are required to fulfil the organization's strategy.
- Prepare a mission statement for each project.
- Establish a team to carry out the project.
- Plan the project (Juran et al. 2001).

**Quality Goals Are a Moving Target:** It is widely recognized that quality goals must keep shifting to respond to the changes that keep coming over the horizon: new technology, new competition, threats and opportunities. While organizations that have adopted quality management methods practice this concept, they may not do as well on providing the means to evaluate the impact of those changes and revise the goals accordingly (Juran et al. 2001).

**Project Goals:** Specific goals of the project, that is, what the project team is to accomplish, are part of an effective mission statement. In getting the job done, the team must mentally start at the finish. The more focused it is on what the end result will look like, the easier it will be to achieve a successful conclusion (Juran et al. 2001).

**Measurement of the Goal:** In addition to stating what will be done and by when, a project goal must show how the team will measure whether or not it has achieved its stated goals. It is important to know how success is measured. Listed below are the four things that can be measured: 1. Quality; 2. Quantity; 3. Cost; 4. Time (Juran & De Feo 2010).

Juran & De Feo (2010) demonstrated that an effective quality planning project goal must have five characteristics for it to provide a team with enough information to guide the planning process. The goal must be:

- Specific
- Measurable
- Agreed to by those affected
- Realistic
- Time specific

**Step 2: Identify the Customers**

This step provides for systematic identification of all the customers. It is impossible to close the understanding gap if there is the least bit of uncertainty, fuzziness, or ignorance about who all the customers are (Juran et al. 2001).

It may seem unnecessary; of course, the planners and designers know who their customers are: the driver of the automobile, the depositor in the bank account, the patient who takes the medication. But these are not the only customers—not even necessarily the most important customers (Juran et al. 2001).

According to Gronroos (2007) customers comprise an entire cast of characters that needs to be understood fully. Generally, there are two primary groups of customers: the external customers—those outside the producing organization; and the internal customers—those inside the producing organization.

**Step 3: Discover Customer Needs**

According to Juran et al. (2001) the third step of quality planning is to discover the needs of both internal and external customers for the product or service. The discovery of customer needs provides the full and complete understanding required for a successful product design to

meet those needs. It also evaluates customer perceptions explicitly so that the final perception gap can be avoided.

Some of the major activities required for effective discovery of customer needs include:

- *Plan to collect customers' needs.*
- *Collect a list of customers' needs in their language.*
- *Analyze and prioritize customers' needs.*
- *Translate their needs into "our" language.*
- *Establish units of measurement and sensors* (Juran et al. 2001: 3).

It is known that the needs of human beings are both varied and complex. This can be particularly challenging to a planning team because the actions of customers are not always consistent with what they say they want. The challenge for quality planning is to identify the most important needs from the full array of those needs expressed or assumed by the customer. Only then can the product delight the customers (Juran et al. 2001).

Juran et al. (2001) detailed that customer needs keep changing. There is no such thing as a final list of customer needs. While it can be frustrating, planning teams must realize that even while they are in the middle of the planning process, forces such as technology, competition, social change, and so on, can create new customer needs or may change the priority given to existing needs. Therefore, they recommend that it becomes extremely important to check with customers frequently and to monitor the marketplace.

**Step 4: Develop Product**

Once the customers and their needs are fully understood, the company is ready to design the product that will meet those needs best. This step uses both quality planning tools and the technology of the particular industry to create a design that is effective in meeting the customer needs, thereby closing the design gap. Product development is not a new function for a company. Most companies have some process for designing and bringing new products to market. In this step of the quality planning process, managers will focus on the role of quality

in product development and how that role combines with the technical aspects of development and design appropriately for a particular industry (Juran et al. 2001).

Within product development, product design is a creative process based largely on technological or functional expertise. The designers of products traditionally have been engineers, systems analysts, operating managers, and many other professionals. In the quality arena, designers can include any whose experience, position, and expertise can contribute to the design process. The outputs of product design are detailed designs, drawings, models, procedures, specifications, and so on (Juran & De Feo 2010).

Juran et al. (2001) demonstrated the overall quality objectives for this step as follows:
Firstly, to determine which product features and goals will provide the optimal benefit for the customer and then to identify what is needed so that the designs can be delivered without deficiencies.

In case of designing services, the scope of this activity is sometimes puzzling. For example, in delivering health care, where do the product of diagnosing and treating end and the processes of laboratory testing, chart reviews, and etcetera begin? Juran et al. (2001) explained that one useful way to think about the distinction is that the product is the "face to the customer." The product is what the customer sees and experiences. The patient sees and experiences the physician interaction, waiting time, clarity of information, and so on. The effectiveness and efficiency of moving blood samples to and around the laboratory have an effect on these product features but are really features of the process that delivers the ultimate product to the customer (Juran et al. 2001).
According to these authors, there are six major activities in this step:

- *Group together related customer needs.*
- *Determine methods for identifying product features.*
- *Select high-level product features and goals.*
- *Develop detailed product features and goals.*
- *Optimize product features and goals.*
- *Set and publish final product design* (Juran et al. 2001: 6).

**Step 5: Develop Process**

Juran et al. (2001) further explained that, after the product or procedure is developed, it is essential to decide ways by which the product will be produced and delivered on a regular basis. These ways are, collectively, the "process." They further explained "Process development" as the set of activities for defining the specific means to be used by operating personnel for meeting product quality goals.

In order for a process to be effective, it must be goal oriented, with specific measurable outcomes; systematic, with the sequence of activities and tasks fully and clearly defined and all inputs and outputs fully specified; and capable, that is, able to meet product quality goals under operating conditions and legitimate, with clear authority and accountability for its operation (Juran et al. 2001).

**Process Quality Management:** Many planners are applying a modern form of management known as "process quality management" to their major processes. This recent, alternative management form has come about in response to an increased realization that many of today's business goals and objectives are becoming even more heavily dependent on large, complex, cross-functional business processes. Process quality management stresses that there are numerous essential processes that are crucial to an organization if it is to maintain and grow its business (Juran et al. 2001).

**Measuring the Process:** To decide on a specific process design, the team will need to obtain information on the effectiveness and efficiency of alternative designs, including: Deficiency rates; cycle time; unit cost; output rate (Juran & De Feo 2010).

**Step 6: Develop Process Controls/ Transfer to Operations**

In this step, planners develop controls for the processes, arrange to transfer the entire product plan to operational forces, and authorize the implementation of the transfer. After the planning activities are completed, these plans are given for the operating departments. It then becomes the responsibility of the operational personnel to produce the goods or deliver the service and to ensure that quality goals are met correctly and accurately. They do this through a planned system of quality control. Control is largely directed towards constantly meeting goals and preventing adverse changes from affecting the quality of the product. This means that no matter what takes place during production (such as: change or loss of personnel, equipment or electrical failure, changes in suppliers, and so on), workers will be able to adjust or adopt the process to these changes or variations to ensure that quality goals can be achieved (Juran et al. 2001).

In developing process controls, optimizing self-control and self-inspection is a crucial activity. Operations self-control takes place when workers know what they are supposed to do; goals and targets are clearly spelled out and visible; when workers know what they are doing; their output is measured and they receive immediate feedback on their performance; workers have the ability and the means to regulate the outcomes of the process. They need a capable process along with the tools, training, and authority to regulate it (Juran & De Feo 2010).

Juran & De Feo (2010) indicated that in addition to providing the optimal conditions for process operation and control, establishing self-control has a significant, positive impact on the working environment and the individuals in it.

Whenever possible, the design of the quality control system should stress self-control by the operating forces. Such a design provides the shortest feedback loop but also requires the designers to ensure that the process capability is adequate to meet the product quality goals. Once self-control is established, self-inspection should be developed. Self-inspection permits the worker to check that the product stick to quality standards before it is passed on to the next step in the production cycle. Production and front-line workers are made to feel more

responsible for the quality of their work. They should get immediate feedback on their performances, thereby facilitating process adjustments. Since the traditional inspection approach has the psychological disadvantage of using an "outsider" to report the defects to the workers and the costs of a separate inspection department can be reduced, it is important to optimize the self-control and self-inspection approach in an organization (Juran & De Feo 2010).

## 2.7 The Complexity in Implementing Quality Management

To achieve improvements in organizational effectiveness, quality management, business process reengineering and information systems are implemented internationally as important management methods. Among these methods, quality management implementation "has become something of a social movement"(Hackman & Wageman 1995:309). Since its introduction, quality management's influence has expanded from manufacturing to other industries including educational institutions, health care organisations, public services, and non-profit organisations.

Many authors symbolize the advantages of quality management from various perspectives, such as business performance (Hendricks & Singhal 1997), customer satisfaction (Choi & Eboch 1998), and employee satisfaction and empowerment (Gunasekaran 1999). In terms of strategy, the implementation of quality management is viewed as a promising business strategy (Feigenbaum 1999). Despite the recognised advantages, reports on quality management implementation failure are also frequent (Reger, Gustafson, DeMarie & Mullane 1994).

In discussing the successes or failures of quality management implementations one has to consider the coherence of prescriptive (concepts and principles) and empirical (practices) development (Rath 2010).

Quality management is seen as a process-based management method as in reengineering (Hammer 1996). As a process-based method, the focus of quality management implementation is on process management. Benner & Tushman (2003) define the extents of process

management activities as mapping, streamlining, and adhering to the improved processes. They propose that the improved process management makes progress in terms of responsiveness and performance. The progress involves the conditional influences of organisational form and environmental context. They point out that the contexts of so-called skilful organisational form and incremental technological change positively influence progress towards responsiveness and performance, while the context of non-incremental technological change influences the progress negatively. Skilful implementation implies the use of more than one function simultaneously for one objective. They indicated that, from this point of view, an ambidextrous organisational form enables an organisation to promote control and flexibility simultaneously, which in practice rarely exists (Rath 2010).

The phases of quality management implementation include the consistency between prescriptive ideas and practices in terms of exploitative and explorative innovations (March 1991). Exploitative innovation is classified by its proximity to current technology for the existing market, in which the context is stable or predictable, while explorative innovation is directed at the emergent market, in which the context is unstable. The first type of innovation is often associated with refinement, consistency and efficiency; while the second type is captured by risk-taking, experimentation, flexibility and discoveries that emphasize challenge and opportunity (March 1991).

Benner and Tushman argued that the inconsistent findings over implementing quality management for supporting such innovations are caused by the failure to fully adopt the associated practices and to form an appropriate culture in which to work. In this perspective, the implementation of quality management often activates great efforts in administrative practices. This creates routines and stabilised procedures that accumulate through steps from introducing concepts and principles, structuring a quality system, and maintaining and improving the related practices (Benner & Tushman 2003).

Authors in the area demonstrated that quality management implementation frequently leads to rationalising the existing work processes with a standardised procedural system. If these practices are institutionalised, as a result of implementation, the organisation achieves

efficiency. This guides an organisation to standardise internal practices of teamwork, correctness and consistency. Adopting improved process management in practice is expected to improve the organisational dynamic capability, which will affect the balance between exploitative and exploratory innovation (Benner & Tushman, 2003). In this case, dynamic capability can be defined as the capacity to combine, construct or reconfigure internal and external competence to address rapidly changing environment (Teece, Pisano & Shuen 1997). If the achievements can be maintained, then teamwork, correctness and consistency will have a direct influence on cooperation, coherence and transparency as essential elements in developing networks, norms and trust (Sztompka 1999). The success in managing quality management implementation - in terms of creating consistency and efficiency, and capturing organisational dynamic capability - is likely to become a model of a 'how to approach' when introducing other new process-based technologies into the organisation ( Hipkin & De Cock 2000).

The need for exploratory innovation expands the centre of attention from technical operational issues to strategic-dynamic issues (Weick 1990). Within this focus, process management faces the risks of uncertainty in the external, longer time horizon, and more diffused effects. To avoid the negative impact of these risks, the adoptive feature of process management steps back to a secure improvement by means such as in exploitative innovation. This increases the complexity in quality management implementation. Weick (1990) demonstrated that an implementation is often the only way in which a technology itself is designed, developed or changed. As a consequence, the complexity of quality management implementation also increases. In this situation, to avoid any impact from the risk of implementation failure an organisation often limits its intentions for further implementation. Even though, studies on managing the complexity of quality management implementation are limited (Harten, Casparie & Fisscher 2002), the implementation process is seen as the key issue in introducing new methods or technologies into an organisation, such as: over the use of office automation (Ruel 2001); in enterprise system implementation (Govindaraju 2002) and in quality management for health care institutions (Harten & et al. 2002). In these research studies, understanding implementation is realised through a deep evaluation of the process of transformation of

concepts and principles into practices suitable for the organisational characteristics and its environment.

## 2.8 Tracking Performance to Manage Education Quality

Tracking performance of an organization is very crucial to improve quality of services provided. Organizations function by means of the collective action of people, yet each individual is capable of taking action independently. Service organizations function is to serve their customers. The activities of these organizations and the needs of the customers may not always be reported properly to those who ought to know about it (Van der Walt 2004). Effective communications are required to achieve coordinated results and to prevent poor quality services. A two way communication among service providers, managers and service users is an important issue to improve service quality. The feedback received from service users help organizations to know when they are doing something really well and when it would be helpful to do something a little differently. This put the organizations in a position to identify specific action for improving service quality (Van der Walt 2004).

Performance tracking that helps to manage activities is an instrument that requires the manager and employees to discuss and agree upon performance expectations (Armstrong 1995). The manager, for instance, must discuss with employees how and when feedback from the manager, from customers and also from the employees, will be communicated. In such a way performance management can contribute to improved service quality.

The organizations management should determine which measurement techniques to use to collect information about their employees performances. According to Van der Walt (2004) interview methods, questionnaires/survey methods, ongoing feedback mechanisms, focus group that reflects diversity of customers and polling are the techniques used to communicate with customers.

Customer consultation is important and it is linked to the measurement of customer satisfaction. Organizations must identify the gaps between what customers expect or need from it and the service they feel they are actually receiving (Van der Walt 2004). Van der Walt puts the following about customers' consultation.

*Customers' consultation allows organizations to:*

- *devise policy solutions;*
- *improve service, and reduce or eliminate services that customers do not value;*
- *meet emerging customers' needs;*
- *build partnerships; and*
- *target high service priorities so that organizations can allocate resources efficiently and effectively* (Van der Walt 2004: 255).

## 2.9 Strategies of Education Quality Management

The following are strategies for education quality management:

### 2.9.1 Student-centred Teaching and Learning

In this model of teaching, students are not considered to be empty vessels. They are considered as if they come with their own perceptual frameworks. The focus is not just on what is taught but on how effective learning should be promoted. Student learning becomes the main concern of the teacher. In student-centred model, the teacher's performance or raw number of facts to be transmitted to the students are not considered as the main concerns (Di Napoli 2004). It is recognized that students learn in different ways and have different learning styles. Personalised/individualised responses are encouraged.

This helps to foster creativity in students. Learning is recognized as an active dynamic process in which connections (between different facts, ideas and processes) are constantly changing and their structure is continually reformatted. Such connections are fostered through dialogue between teacher and students, and students with their peers (Di Napoli 2004). This author reported that this makes 'Student-centred Learning' a highly social enterprise that requires the constant development of human relationship and communication. Students are

constantly encouraged to formulate and re-formulate their hypotheses in the solution of problems and tasks they work on. Students construct their own meaning by talking, listening, writing, reading, and reflecting on content, ideas and issues (Di Napoli 2004).

In student centred model, formative assessment methods are used. This means that assessments' main aim is not to 'quantify' a student's performance in terms of the number of 'facts' they are supposed to acquire but understanding (and helping them to understand) the processes through which they arrive at certain conclusions in solving a given problem. In this way, the students are supported in making sense of their 'journey' through knowledge construction. Constructive and continuous feedback is vital here. Students work with teachers to define performance criteria and develop self and peer-assessment skills (Di Napoli 2004). Di Napoli (2004) explained that in student centred model, syllabi and curricula are organised not just around the 'facts' the learner is supposed to acquire but around the processes through which learning is to be developed. In the most radical 'student-centred' syllabi/curricula, these are 'constructed' jointly by teachers and students.

### 2.9.2 Problem Based Approach

Barrett (2005) explained that problem based learning is seen as a set of approaches under the broader category of enquiry-based learning. This approach demands teachers to be involved in research. One of the main major features of problem-based learning, which distinguishes it from some other forms of enquiry-based learning, is that a problem is presented to the students first at the start of the learning process before other curriculum inputs are made.

Another major feature of problem based learning is that in "Problem based learning tutorials students define their own learning issues, what they need to research, learn to work on the problem and are responsible themselves for searching appropriate sources of information" (O'Rourke & Kahn 2005: 1).

The reviewed literature reveals that the adoption of problem based learning in higher education outside of the medical field gradually occurred throughout the 1990s. Problem based learning

has been applied globally in a variety of professional schools (Boud & Feletti 1991; Wilkerson & Gijselaers 1996), such as leadership education (Bridges & Hallinger 1996; Cunningham & Cordeiro 2003), teacher education (Oberlander & Talbert-Johnson 2004), business administration (Merchand 1995), architecture (Donaldson 1989; Maitland 1998), nursing (Barnard, Nash & O'Brien 2005; Higgins 1994), engineering studies (Cawley 1989), chemical engineering (Woods 1996), law schools (Boud & Feletti 1991; Kurtz, Wylie & Gold 1990; Pletinckx & Segers 2001) and social work (Bolzan & Heycox 1998).

Moreover, Moust, Van Berkel & Schmidt (2005) reported that problem based learning is also frequently integrated into a wider range of disciplines, such as biology (Szeberenyi 2005), biochemistry (Osgood, Mitchell & Anderson 2005), calculus (Seltzer, Hilbert, Maceli, Robinson & Schwartz 1996), chemistry (Barak & Dori 2005), economics (Garland 1995), geology (Smith & Hoersch 1995), psychology (Reynolds 1997), science courses (Allen, Duch & Groh 1996), physics, art history, educational psychology, leadership education, criminal justice, nutrition and dietetics, and other domains of post-secondary education (Edens 2000; Savin-Baden 2000; Savin- Baden & Wilkie 2004).

Szeberenyi (2005) described that problem-based learning is a student centred instructional methodology; that is, it is an instructional solution to learning problems. The primary goal of problem based learning is to enhance learning by requiring learners to solve problems.

Barak & Dori (2005), demonstrated that in problem based learning, students in a group having five to eight members meet together and discuss on given problems. By identifying what they know already, what hypotheses or assumption they can think of, what they need to learn to better understand the scopes of the problem, and what learning activities are required and who will perform them, then they try to describe and bound the problem and put learning goals.

### 2.9.3 Link Theory to Practice

In a teaching- learning process, what students learn in classrooms (theories and principles) must be linked with the actual practices in organizations. The simplest approach to define how to link theory to practice is: you will learn theory during lectures and will then apply it in practice (Korthagen & Kessels 1999).

Theory, in this context, was presented as a kind of pseudo-scientific justification for practitioner action, the implication being that, by using it to generate hypothetical solutions to problems; it could be applied in practice. By now one can state that the training philosophy slogan 'Learning theory at academy and applying theory in practice' is outdated (Drever & Cope 1999). Over the last few years a number of researchers have brought up the problem of the relationship between theory and practice (Korthagen 2001; Carlson 1999; Hill 2000). Some authors express – often implicitly – the belief that there should be no gap between theory and practice in an appropriate training program. Leinhardt & et al. stress the important role for teacher education to facilitate the process of linking theory and practice (Leinhardt & et al. 1995).

Future practitioners should be given the opportunity to construct their own theories from their own practice, and to attentively generate authentic experiences of practice from their own theories. Leinhardt & et al., has said the following about the link between theory and practice:

> "*We have proposed that the university should take on the task of helping learners integrate and transform their knowledge by theorizing practice and particularizing theory. We believe that the university can facilitate this process because it can create opportunities for time and pace alteration, reflection on practice, and examination of consequences. Ideally, such episodes of integration and transformation should be systematic and comprehensive rather than arbitrary and piecemeal* "(Leinhardt & et al., 1995: 404).

Unhindered by everyday concerns, students can reflect on authentic situations, whereas in learning environment all kinds of content-related and organizational components can be created that will 'feed' the learning environment with theory. In learning the expectation is that theoretical knowledge, as part of the professional knowledge base, will manifest itself in several quality and degrees.

In such a learning environment theory can fulfil the desired function of laying an orientation base for reflection on practice. Higher education arranged in this way should enable students to acquire 'theory enriched practical knowledge' and this is an important strategy to manage education quality (Korthagen 2001).

### 2.9.4 Continuous Assessment

The main objective of continuous assessment is to obtain a reliable picture of the progress of the learner in terms of achieving the basic competencies as set out in the objectives of the syllabus as early as possible and to embark upon corrective measures if needed. "By acting immediately when the learner is judged to be at a 'point of divergence', the teacher can pre-empt a conceptually costly meander" (Uiseb, 2009: 28). Teachers would have a better follow-up of their learners' work all throughout the course delivery. Teachers would also have time to undertake any revision of basic notions with learners.

Linchevski, Liebenberg, & Sasman reveal that "assessment should aim at evaluating learners' performance on core material or on topics or concepts that are crucial for understanding subsequent topics in the curriculum, and should thus form an integral part of lesson planning"( Linchevski & et al. 1998: 3). Rayment states that "in order for assessment to work effectively it must be a continuous process" (Rayment 2006: 52). According to Rayment there is little point awarding grades, scores, and praise if they do not mean anything to the learner. He further mentions that assessment is an effective monitoring tool which helps learner to feel valued and that learning and achievement has a purpose. Another positive aspect of continuous assessment is that it could improve teacher-learner relationship because of individual monitoring and therefore teachers and learners could work closely (Uiseb 2009). A

variety of assessment methods are possible and thus wide range of abilities, skills and attitudes could be assessed through continuous assessment. As hinted earlier, increasingly assessment is being used not only to monitor learner achievement, but also to evaluate the competence of educators and the quality of educational systems.

The nature of continuous assessment is that it occurs at various times as part of instruction. It may occur following a lesson, usually following a topic and frequently occurs following a theme. The integration of continuous assessment with teaching is aimed at improving learning and to help shape and direct the teaching-learning process (Uiseb 2009).

Continuous assessment is the assessment of learners' performance on a course over a period of time doing different tasks, and not just assessing them in a few hours or minutes on one day. According to Uiseb continuous assessment can be formal or informal. "Formal continuous assessment consist of structured activities, for example, oral or written assignments, tests and examinations, projects, presentations, demonstration of skills, role-playing, and quizzes. Informal continuous assessment is less structured and normally done in a subjective way" (Uiseb 2009: 24).

Assessment of learning is a systematic, on-going, interactive process of education quality management in order to determine what teachers are doing well and what they must improve. Another way how the progress of learners can be gauged is by listening to a discussion group or observing the participation of individuals or groups. "A record book or file is needed to record progress by putting either a mark or a symbol next to the name of the learner" (Uiseb 2009: 24).

Freiberg and Driscoll refer to assessment "as a strategy for measuring knowledge, behaviour, performance or attitude" (Freiberg & Driscoll 1996 cited in Uiseb 2009: 24) while Jones considers assessment "as a means that describes and classifies learner performance in tests, examinations, etc" (Jones 1997: 12). In other words, when applied to classroom situations, assessment may be regarded as all procedures of collecting and interpreting information, which the teacher may use to determine what is happening in the classroom such as learners' progress or achievement.

Gronlund regards "validity and reliability as the important characteristics of a well-designed assessment procedure" (Gronlund 1998: 23). The current researcher shares the same opinion with Gronlund because assessment should be adopted to meet the desired goals so that it helps to manage the required education quality.

### 2.9.5 Staff Development

Having committed, capable and experienced staff in a university is a key strategy for education quality management. Because, although there are many contributing factors, it is true that after joining universities the academic achievement of students depends largely on what students do with their instructors. In this regard, the role of teaching staff is central in improving students learning performance through quality teaching. "Quality teaching demands academic staff with appropriate qualifications, professional competence (capacity and experience), motivation and commitment that is relevant to the level of programs they are assigned/ appointed for" (Mulu 2012: 125).

The Federal Democratic Republic of Ethiopia set standards for qualification of staff teaching in universities. The standard set demands for qualification mix of at least 30% PhDs, 50% Masters and 20% Bachelor holders in a university. According to the standard the staff offering courses at universities should have a qualification one level higher than the one on offer (that is to teach in undergraduate (bachelor degree) classes one has to have a second degree qualification (Negaritgazeta 2009). Ethiopian public universities use this standard as a strategy to manage education quality. But its practical implementation seems differently.

### 2.9.6 Utilization and Quality of Educational Facilities

Quality of educational facilities in this regard refers to the extent to which the accessible facilities are relatively up-to-date such as library book collections, laboratories, equipment and course materials and how they are effective and efficient enough to enhance quality of student learning (Mulu 2012).

Resources are scarce to employ them in unpromising undertakings, or to permit capacity to be impaired by inefficient methods of operation. The central objective of economic effort, whether looked at generally or in terms of specific activities, is utilization of the available resources in such manner as to maximize output (Panton 1963 cited in Biruk 2008).

To contend with the shortage of educational facilities, the available ones should be used properly. In line with this Bekuretsion indicated that, "Optimum utilization of available scarce resources and prevention of all types of waste are required by adopting scientific system of management and control of materials" (Bekuretsion 2005: 8). Similarly, Setotaw (2001) pointed out that controlling which involves standards of performance, measuring results of work activities and taking corrective measures on time if deviations are detected are important in resource management.

As reported in Baldry (2000) it is assumed that there is a causal link between facilities management practices and performance. The role of facilities management in facilitating organizational performance, and thereby in providing competitive advantage, is widely acknowledged (Mbamba 1992). The above ideas might be workable and well acceptable for every educational level including the higher learning institutions.

According to Biruk (2008) the success of teaching and learning process is practically depending upon how educational institutions are capable of managing and utilizing their scarce resources effectively and efficiently. Moreover, the effectiveness and efficiency of educational facilities utilization is a strategy for improving education quality (Bekuretsion 2005). Quality of educational facilities such as library book collections, laboratories, equipment and course materials and how they are effective and efficient enough to enhance quality of student learning can be seen as a strategy for education quality management.

## Part Two: Theoretical Frameworks

This second part of the related literature review deals with theoretical frameworks that are globally used in quality management. From these theoretical frameworks the researcher will adopt one of the existing models to guide the current investigation.

### 2.10 Quality Management Frameworks in Higher Education

The most known quality management frameworks are: ISO 9001, the European Foundation for Quality Management (EFQM) and the balanced scorecard. ISO 9001 is the world's most popular quality management system standard and is all about keeping customers satisfied. Whatever sector they operate in, from manufacturing to services companies that have adopted the principles of quality management have benefited from more efficient ways of working, better cost control and fast and more effective implementation (Chen & Chen 2014).

According to literature reviewed for this study a number of higher education institutions have tested quality management models originally developed for business institutions and industry. It is reported that this approach has yielded a number of benefits for managing quality; however, there are also a number of limitations related to the application and relevance of these models in higher education (Motwani & Kumar 1997). Internationally, the model most frequently drawn upon is total quality management (Cruickshank 2003).

Total quality management (TQM) is defined as: "a management approach of an organisation, centred on quality, based on the participation of all its members and aiming at long run success through customer satisfaction and benefits to all members of the organisation and to society" (ISO 8402 cited in Wiklund, Wiklund & Edvardsson 2003: 99).

Brookes & Becket (2007) demonstrated that TQM has the potential to include perspectives of diverse stakeholders in an integrated manner and thus is an inclusive approach to quality management that can facilitate change and innovation. Other models that have been tested within higher education are defined in Table I as shown below.

Table I: Quality Management Models

| Model | Definition |
|---|---|
| EFQM Excellence Model | Non-prescriptive framework that establishes 9 criteria (divided between enablers and results), suitable for any organisation to use to assess progress towards excellence |
| Balanced Score card | Performance/strategic management system which utilises 4 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. 7 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 Reengineering | 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 5 dimensions: reliability, tangibles, responsiveness, assurance and empathy and to identify where gaps exist |

Table I taken from Brookes and Becket, (2007)

These models replicate TQM and concentrate on developing systematic business processes that are required to achieve measurable quality outputs. For example, the balanced scorecard requires the identification of appropriate performance indicators and the European Foundation for Quality Management (EFQM), performance enablers and results. The one exception is SERVQUAL, a model that focuses on the assessment of quality from a consumer perspective (Brookes & Becket 2007).

A key benefit of all the models is reported to be the requirement for institutions or departments to adopt a strategic approach to quality measurement and management (Cullen, Hassall & Broadbent 2003). Conversely, as Table I shows, there are other distinct tangible benefits associated with particular models for the different higher education stakeholders (Roberts & Tennant 2003).

For example, TQM models are associated with improvements in customer service and faculty morale; the balanced scorecard is reported to improve budgeting, resource allocation and reward systems and ISO 9000 has led to improvements in inter-departmental working conditions and student enrolment. These models also incorporate the perspective of students as customers, an issue of growing importance in an increasingly competitive environment. A final benefit is that these models all facilitate the identification of quality enhancement priorities (Brookes & Becket 2007).

However, these benefits must be reconciled with a number of limitations largely related to the dilemma of applying business models in higher education context. For example, bureaucratic structures within higher education institutions and lack of effective leadership are reported to undermine the application of the models (Roffe 1998; Osseo- Asare & Longbottom 2002; Cruickshank 2003; Mizikaci 2006). The effectiveness of the models, particularly TQM model, also relies predominantly on a team-based approach that is proving controversial to the traditional autonomous role of academics (Srikanthan & Dalrymple 2004).

Even though Table I doesn't show it, there is also a continued debate on the role of the student as customer or co-producer in the higher education system (Motwani & Kumar 1997; Shutler

& Crawford 1998; Lawrence & McCullough 2001; Tam 2002) and this has an impact on the measurement and management of quality in higher education when using these industrially developed models. Furthermore, there is an inherent difficulty in quantifying the outputs of higher education for self-assessment purposes. When assessing the outputs, the models are reported to have far greater applicability in measuring administrative or service functions within the higher education institutions rather than the quality of research or teaching and learning (Aly & Akpovi 2001; Cruickshank 2003; Srikanthan & Dalrymple 2004). Since the fundamental product of higher education is students learning, this would appear to be a major shortcoming in using these models (Shutler & Crawford 1998).

According to Brookes & Becket (2007) in response to these concerns, there have been increasing efforts made to develop quality management models specifically for higher education. Academics across the globe reviewed have attempted to develop models that reflect the unique characteristics of higher education and the importance of the student learning experience. Table II provides an overview of the models developed and their key characteristics. See Table II in the next pages.

Table II: Quality Management Models Developed for higher education (HE)

| HE Specific Model | | **Key characteristics of the model** |
|---|---|---|
| Model for Quality Management in Higher Education | Srikanthan & Dalrymple (2004, 2003, 2002), Australia | • this approach is based on evidence from educational literature.<br>• 4 methodologies; transformative; engagement theory of programme quality; methods to develop a university of learning; strategies for achieving a responsive university.<br>• In teaching and research students are participants and the focus is on their learning.<br>• Implementation of 2002 model focusing on philosophies and approaches to student learning and methods of engendering a dynamic collaboration around student learning.<br>• Recommends a move from the ritual of teaching to focus on student learning, academic productivity and organisation performance.<br>• Radical change using student learning as the central criterion. |
| Excellence Model | Pires da Rosa et al. (2001, 2003), Portugal | • Based on empirical research, 9 criteria supporting self analysis and acting as a source for quality improvement and leading strategic development.<br>• Quality management associated with evaluation activities covering teaching and research and regarded by participants as positive. |

Table II: Quality Management Models---------- continued

| HE Specific Model | | **Key characteristics of the model** |
|---|---|---|
| Academic Award Model | Badri & Abdulla (2004), United Arab Emirates | • Concerned with teaching, research and services to develop a more explicit approach to faculty rewards.<br>• Model includes criteria for diversification, course development, material production, student evaluation, course files, teaching portfolio and contributions to conferences and workshops. |
| Model to Assess Quality of Student Experience and Learning Outcomes | Tam (2006, 2002), Hong Kong | • Assessment of quality in higher education should be measured in terms of student growth, this call for attention on student outcomes, including cognitive and non cognitive aspects of learning, skills and satisfaction with university environment.<br>• Investigates relationship between university experience and student outcomes as a means of determining a university's success in meeting its educational goals and proposes approach oriented to this.<br>• Instrument designed to help understand the student experience. |
| Multi – models of Quality in Education | Cheng & Tam (1997), Hong Kong | • Identifies 7 models of quality in education and emphasises the complexity of pursuing educational quality.<br>• Effectiveness and quality are concepts used to understand performance, so approach needs to be comprehensive and take account of longer term goals.<br>• Cross cultural issues require further investigation. |

Table II: Quality Management Models---------- continued

| HE Specific Model | | **Key characteristics of the model** |
|---|---|---|
| Performance Measures for Academic Departments | Al-turki & Duffuaa (2003), Saudi Arabia | • Adopts a systems approach and identifies performance measures to evaluate productivity, efficiency, effectiveness, internal structure, growth and development.<br>• Hierarchical performance measurement model is based on outcome measures for each category – input, process and outputs. |
| Internal Audit | Reid & Ashelby (2002), UK | • Identifies tangible benefits from internal audits, such as: significant cultural changes which can re-enforce quality enhancement, create greater staff involvement, as well as benefits to the institutions.<br>• Considers programme management, development and evaluation, staff development, assessment of students, external examining processes, collaborative provision and value added. |
| Internal Audit | Becket & Brookes (2006), UK | • Model to evaluate quality management approaches in departments.<br>• Dimensions identified: internal/external perspective, qualitative/quantitative information, snapshot/ longitudinal time span, quality dimension assessed and system elements. |
| Quality Dimensions Framework | Owalia & Aspinwall (1996), UK | • 30 different quality characteristics identified for HE using generalised dimensions defining quality drawn from manufacturing/software and service methods. |
| Programme Evaluation Model | Mizikaci (2006), Romania | • Considers HE as a system (input, processes and outputs) for programme evaluation and identifies social, technical and management systems within these. |

Table II: Quality Management Models---------- continued

| HE Specific Model | | **Key characteristics of the model** |
|---|---|---|
| Quality Management Framework | Grant et al. (2004, 2002) Widrick et al. (2002), USA | • Identify dimensions of quality in HE – quality of design, conformance and performance.<br>• Quality of performance is least likely to be considered. |
| Subject Quality Assurance System | Martens & Prosser (1998), Australia | • University-wide system of quality assurance to enable systematic review and enhancement of individual subjects, allowing for discipline-specific requirements.<br>• The focus is on the improvement of student learning. |
| ISO – Based TQM Model | Borahan & Ziarati (2002), Turkey | • Combine TQM, Malcolm Baldridge and ISO 9000 principles drawing on USA and UK practices to identify quality criteria.<br>• Building blocks for quality assurance and control include: programme management and operations, curriculum design content and organisation, teaching learning and assessment, student support and guidance, and quality assurance and enhancement. |
| 5 Phase TQM Implementation Model | Motwani & Kumar (1997), USA | • Identifies the issues which institutions need to consider when implementing TQM in 5 phases: deciding, preparing, starting, expanding or integrating, and evaluating. |

Table II taken from Brookes & Becket (2007)

Table II displays that majority of these models still borrow heavily from industrial applications. One exception however, is the model developed by Srikanthan & Dalrymple (2002, 2003,

2004) that draws solely on the educational, rather than the managerial literature. A key focus of their proposed model is that the student learning experience is safely at the centre of quality management. It is not amazing if industry models that focus on efficiency and effectiveness are being implemented in higher education sector. However, there are potential dangers of focussing on quality management of non-academic matters than educational issues in this approach (Brookes & Becket 2007).

**2.11 Model for Quality Improvement/the Deming's Wheel**

While there have been many contributors to the theories of management and of education, two names stand out for both the boldness of their departures from past thinking and the comprehensiveness of their approaches. W. Edwards Deming (1900-1993) and Reuven Feuerstein (1921- ) have each pioneered new ways to think and to act, the one in management and the other in education. Together they provide a new way to approach education quality management (Tribus & Fremont 2014).

W. Edwards Deming, in over a half century of teaching and lecturing, has influenced managerial practices all over the World. His book, "Out of the Crisis" has been translated into many languages. The Deming Prize in Japan is given to companies which show excellence in the application of his ideas. Companies in Japan and elsewhere now compete for this prestigious prize. If the work of Fuersatein is to succeed, it is essential that educators also understand the work of Deming. What goes on in the classroom is constrained by what goes on in administration; and vice-versa (Tribus & Fremont 2014).

A four-step quality model- Plan-Do- Check -Act (PDCA) cycle, also known as Deming Wheel or Shewhart Cycle is the most widely used tool for continuous quality improvement. The Plan-Do-Check-Act (PDCA) cycle is the operating principle of all ISO management systems standards, including ISO 9001. By following this cycle, managers can effectively manage and continually improve their organization's effectiveness. The PDCA cycle had its origin with W. Edwards Deming's lecture in Japan in 1950. Walter Shewhart in 1939 applied the scientific

method with his cycle: specification-production-inspection. W. Edwards Deming in 1950 modified the Shewhart cycle: “design the product, make it, put it on the market, test it through market research, then redesign the product.” The Deming wheel was integral to the Japanese quality control, total quality control and quality control circle activities. Deming introduced his Shewhart cycle for learning and improvement in the USA in 1986. Deming introduced a more abbreviated PDSA/ plan-do-study-act cycle in 1993 (Norman 2009).

In 1994, the PDSA cycle was accompanied by three questions to aid in the planning step of the PDSA Cycle. In 1996 and 2009 publications, the PDSA cycle was broadened to include strategies and methods to develop, test, and implement changes that would result in improvement. This version was called the “Model for Improvement.” As an introduction to a framework for improvement, the model for improvement has been found to support improvement efforts in a full range from the very informal to the most complex (Norman 2009).

Norman demonstrated that the following are activities included in each steps of the PDSA cycle (Norman 2009).

1. Plan (Design) - Product design corresponds to the planning phase of management. Activities involved in this step include:

- Study and document the existing process
- Collect data to identify problems
- Survey data and develop a plan for improvement
- Specify measures for evaluating the plan

2. Do (Production) - Production corresponds to doing-making, or working on the product that was designed. Activities in this step include:

- Implement the plan on a small scale
- Document any changes made during this phase
- Collect data systematically for evaluation

3. Study (Sales) - Sales figures confirm whether the customer is satisfied

Evaluate the data collection during this phase

Check how closely results match with the original goals of the plan phase

4. Act (Research) - If the results are successful, standardize/harmonize the new method and communicate it to all people associate with the process. Implement training for the new method. If results are unsuccessful, revise the plan and repeat the process or cease this project. The following figure shows the PDSA Cycle or model for quality improvement.

**Model for Quality Improvement**

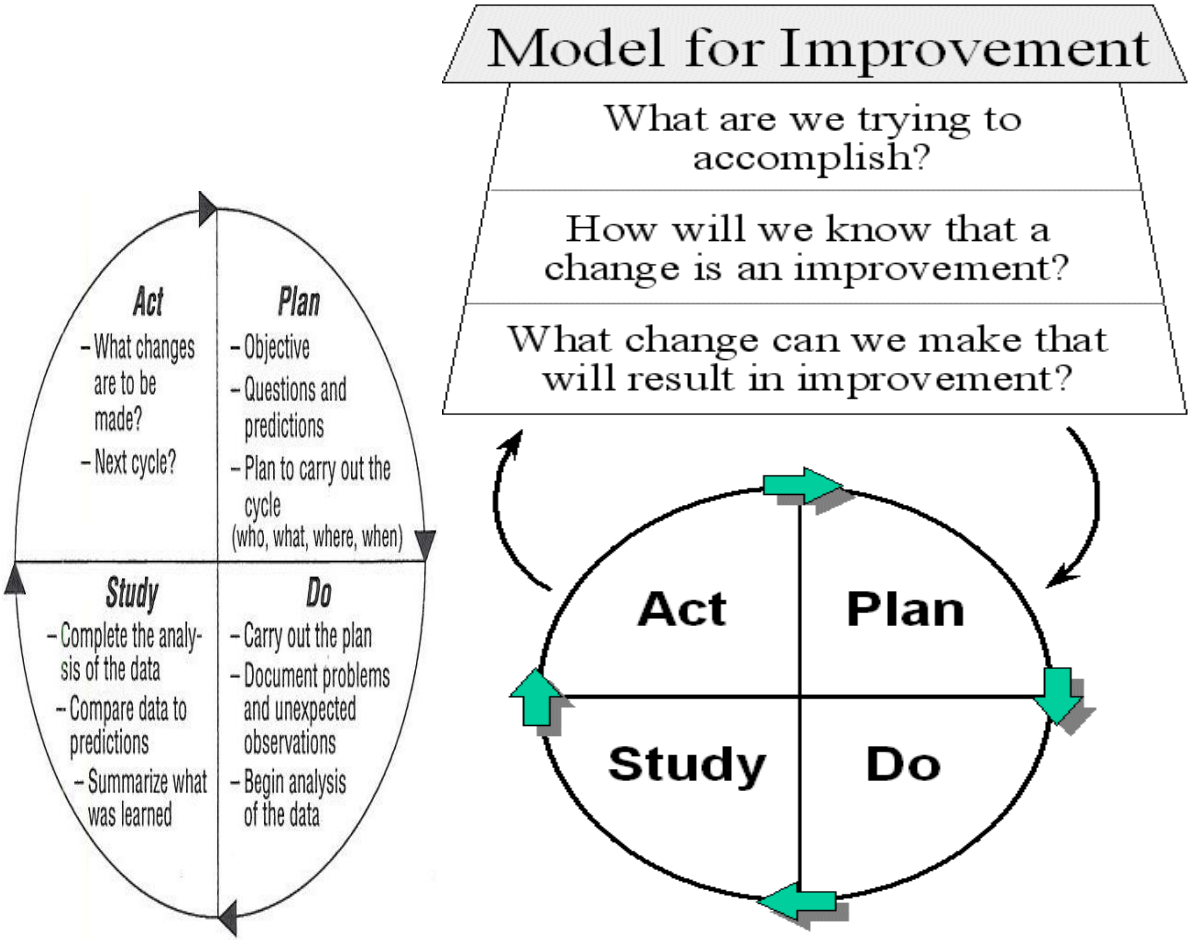


**Figure 1: The Deming's Wheel, PDSA Cycle, Taken from Norman 2009: 24**

“Deming cycle is a tool for continuous quality improvement and an ongoing effort to improve products, services or processes. These efforts can seek ‘incremental’ quality improvement over time or ‘breakthrough’ quality improvement all at once” (Norman 2009: 24). In this study, the researcher used model for quality improvement/ the PDSA cycle to develop basic research questions and to design questionnaire items.

## 2.12 Chapter Summary and Gap Identification

In this chapter, the researcher discussed the various definitions of quality. The different models of quality management in general and higher education quality management in particular, quality planning procedures, the complexity in quality management implementation practices in different higher education institutions and strategies of education quality management have been discussed based on various research findings. The literature reviewed depicts that there are about six steps followed in quality planning. Moreover, effective communications are required to achieve coordinated results and to prevent poor quality services. A two way communication among service providers, managers and service users is an important issue to improve service quality. Interview methods, questionnaires (survey methods), ongoing feedback mechanisms, focus group that reflects diversity of customers’ needs and polling are the techniques used to communicate with customers about the quality of education provided. Finally, the reviewed literature depicts that student-centred learning, problem based learning, linking theory to practice, continuous assessment, staff development and quality and utilization of learning facilities are strategies used to manage education quality in different educational institutions.

Then the current research is going to investigate whether this is also true in Ethiopian public universities. As there is no literature that reveals the status of Ethiopian public universities education quality management practices, this study is going to fill this gap.

In the next chapter the researcher will discuss research paradigm, research approach, research design, population and sampling, instruments of data collection, reliability and validity of instruments, research ethics, and methods of data analysis that he has used in his study.

# Chapter Three

## 3. Research Methodology

### 3.1 Introduction

In this chapter the researcher will present the methodology of his research. The research paradigm, research approach, research design and population and sampling used are discussed. Reliability and validity of data collection instruments and ethical principles followed in conducting this research are also discussed in this chapter.

### 3.2 Research Paradigm

The term paradigm refers to a set or cluster of commonly held beliefs or values within the research or scientific community about a field of study. The beliefs are seen as shaping or dictating how researchers should proceed in carrying out research in their field-what they should focus on, what methods to use and how the results should be interpretted (Common wealth of learning 2004).

Pradigm is the broad framework which comprises perception, beliefs and understanding of several theories and practices that are used to conduct a research (Morgan 2007). It can also be characterized as a precise procedure which involves various steps through which a researcher creates a relationship between the research objectives and questions. Pradigm is a way of thinking about and conducting a research. It is not strictly a methodology, but more of a philosophy that guides how the research is to be conducted (Morgan 2007).

Research paradigm and philosophy comprises various factors such as individual's mental model, his/her way of seeing things, different perceptions, variety of beliefs towards reality and so on. This concept influences the beliefs and values of the researchers, so that they can provide valid arguments and terminologies to give reliable results. The following are the three ways to think about research philosophy (Creswell, Goodchild & Turner 1996):

**1.Epistemology:** Common parameters and assumptions which are associated with the excellent way to investigate nature of the real world.

**2. Ontology**: Common assumptions that are created to understand the real nature of the society.

**3. Methodology:** Combination of different techniques that are used by the researcher to investigate different situations.

It is necessary for the researcher to understand the philosophical position of research issues to understand the different combination of research methods. There are mainly three types of paradigms to understand the reality. These are Positivism, Interpretivism and realism. A paradigm provides a conceptual framework for seeing and making sense of the social world. Paradigm is termed a "world view" by other researchers (Patton 2002: 37). According to Morgan (2007: 24), "To be located in a particular paradigm is to view the world in a particular way".

The significance of paradigms is that they shape how researchers perceive the world and are reinforced by those around them, the community of practitioners. Within the research process the beliefs a researcher holds will reflect in the way the research is designed, how data is both collected and analysed and how research results are presented. For the researcher it is important to recognise the paradigm. It allows to identify the researcher's role in the research process, determine the course of any research project and distinguish other perspectives.

This study is based on pramatic research paradigm. Pragmatism, as a philosophical discourse, uses criterion of 'what works?' to determine which method to use to answer a specific question

(Mertens 2007). In this paradigm, what works is what is useful and should be used, regardless of any philosophical or paradigmatic assumptions. For pragmatists reality is plural, an event and a process and truth is tentative that will serve the purpose until experience evolves a new truth (Webb 1996). According to pragmatism, there is no absolute reality, knowledge is arrived at by sceintific inquiry, testing, questioning and retesting and no conclusive and definitive meaning is drived from experience (Webb 1996). In this paradigm, researchers can hold seemingly diametrically opposite view points if they agree on the basis for warranted assertions about the workability of different lines of action (Morgan 2007).

### 3.3 Research Approach

The major purpose of this study is to investigate quality management of education in Ethiopian public universities as reported by education managers and student union representatives. To serve this purpose, mixed research approach has been used. The combination of both quantitative and qualitative research approaches is to offset weaknesses of each of the approaches and to draw on their strengths.

According to Saunders, Lewis & Thornhill (2007) mixed research approach enables researchers to gather various kinds of data to understand issues understudy in detail. The mixed research approach is appropriate for this study as it helps to collect and analyse useful data through collecting both quantitative and qualitative information.

The mixed research approach is less well known than either the quantitative or qualitative strategies. It involves collecting and analyzing both forms of data in a single study. The concept of mixing different methods probably originated in 1959, when Campbell and Fiske used multiple methods to study validity of psychological traits (Creswell, 2009). They encouraged others to employ their "multi method matrix" to examine multiple approaches to data collection in a study. This prompted others to mix methods, and soon approaches

associated with field methods such as observations and interviews (qualitative data) were combined with traditional surveys of quantitative data. Recognizing that all methods have limitations, researchers felt that biases inherent in any single method could neutralize or cancel the biases of other methods. Triangulating data sources as a means for seeking convergence across qualitative and quantitative methods -were born (Jack 1979 in Creswell 2009). From the original concept of triangulation emerged additional reasons for mixing different types of data. For example, the results form one method can help develop or inform the other method. Alternatively, one method can be nested within another method to provide insight into different levels or units of analysis (Tashakkori & Teddlie 1989 cited in Creswell 2009).

These reasons for mixing methods have led writers from around the world to develop procedures for mixed methods strategies of inquiry and to take the numerous terms found in the literature, such as multi method, convergence, integrated, and combine and shape procedures for research (Creswell 2009).

In order to achieve the objectives of this study, the current researcher used sequential mixed research approach in which quantitative data were presented and analysed first and then qualitative data collected through semi structured interviews and open ended items in the questionnaires were presented and analysed.

**3.4 Research Design**

In this study the mixed methods research design is used. The mixed methods design is rooted in pragmatism paradigm. It rejects to choose a single method from among the postpositivist and the constructivist paradigms (Mertens 2004, Patton 2002). Pragmatists argue that a false distiniction exists between quantitative and qualitative approaches and that the relative srtengthes of each should be tapped in a single study (Cresswell et al. 1996). A mixture or

combination of methods that have complementary strengthes and non overlapping weaknesses is the fundamental principles of mixed methods research.

When used alone, according to post positivists, both quantitative and qualitative approaches are flawed. By integrating both qualitative and quantitative approaches, however, the deficiencies of one approach can be offset by the advantage of the other (Cresswell et al. 1996). Miles & Huberman (1994) argue that ‘’---quantitative and qualitative methods are inextricably intertwined, not only at the level of specific data sets but also at the levels of study design and analysis.’’ According to pragmatists, if the researcher provides strong evidence for his or her claims about what practices are effetive, then she/he has met Dewey’s standard of warranted assertability (Johnson & Christensen 2008).

The broad reasons for mixing quantitative and qualitative data include complementarity, triangulation, initiation and expansion (Johnson & Christensen 2008). According to these authors, complementarity seeks elaboration, enhancement and clarification of results using different methods, while triangulation enables confirmation or corroporation or correspondence of results from different methods. Initiation seeks new lines of thinking through attention to surprise or paradoxes, whereas expansion enables to extend the breadth and range of inquiry using different methods. Hence, mixed methods design not only add to the research toolbox, they also provide the opportunity for a synthesis of tradition (Mulu 2012).

The two dimensions of mixed methods design are time order and paradigm emphasis. The time order refers to concurrent versus sequential, while the paradigm refers to equal status versus dominant status. In mixed methods design the quantitative (QUAN) and qualitative (QUAL) data collection are concurrent with the intention to offset the weaknesses inherent to one method with the strengths of the other (Creswell 2007). The weight is usually equal on the two methods; but in practice priority might be given to one or the other (Creswell 2007).

The mixed methods design is used in this study with the intention to get a complete and comprehensive picture of the topic under study. The quantitative descriptive approach was used to generate data from wide number of sources about respondents' knowlendge and practices regarding the nature of the existing education quality management practice of the target universities. However, the quantitative data may not enable deeper explanations for why a phenomena occurs. This condition necessitate the use of qualitative data. Hence, the qualitative approach was employed to get data that captures the different dimensions of respondents' experiences, personal perspectives and beliefs with regard to education quality management practices. It may also help to get deeper insight of issues under consideration and obtain some trends that may emerge from the data.

### 3.5 Population and Sampling

Currently, during 2013, there are thirty one public universities functioning in Ethiopia under the ministry of education. These universities are stratified into three strata (usually classified as the 8 universities, the 13 universities and the 10 universities) based on their history of generation. Then using proportionate random sampling techniques (X/31*10= Y, where: X is number of universities in a strata and Y is number of universities to be taken from a strata), the researcher took three universities from the first strata, four universities from the second strata and three universities from the third strata. From the currently existing 31 public universities only ten (32.26%) universities were included in this research (see table III below).

Finally, all faculty deans, institute/ school directors and all faculty/institute/school student union representatives of the sampled universities were invited to fill in questionnaires. The total number of questionnaires distributed was two hundred fifty (250). The total number of filled questionnaires collected was one hundred eighty two (182) and questionnaires that were not properly answered by respondents were excluded from the analysis. The total excluded questionnaires were twelve (12). Therefore, only 170 valid questionnaires were used for analysis.

Moreover, interviews were held with ten senior instructors and ten senior students to get detailed information on education quality management practices in their university.

**Table III: Population and Sampled Ethiopian Public Universities**

| **Population and its strata** | **Selected Sample** |
|---|---|
| The 8 universities- First strata<br>1. Addis Ababa University<br>2. Haramaya University<br>3. Arba Minch University<br>4. Bahir Dar University<br>5. Gondar University<br>6. Hawassa University<br>7. Jimma University<br>8. Mekele University | Sample size = 3<br><br>1.Addis Ababa University<br>2.Bahir Dar University<br>3. Hawassa University |
| The 13 universities- Second strata<br>1. Adama University<br>2. Aksum University<br>3. Debre Birehan University<br>4. Debre Markos University<br>5. Dilla University<br>6. Dire Dawa University<br>7. Jijiga University<br>8. Medda Walabu University<br>9. Mizan Tepi University<br>10. Semera University<br>11. Welayita Sodo University<br>12. Wellega University<br>13. Wollo University | Sample size = 4<br><br>4. Aksum University<br>5. Dilla University<br>6. Dire Dawa University<br>7. Semera University |
| The 10 Universities- Third strata<br>1. Addis Ababa Science and Technology University<br>2. Adegrat University<br>3. Ambo University<br>4. Asossa University<br>5. Bule Hora University<br>6. Debre Tabor University<br>7. Mettu University<br>8. Wachemo University<br>9. Weldia University<br>10. Welkite University | Sample size = 3<br><br>8. Ambo University<br>9. Asossa University<br>10. Debre Tabor University |
| Total population = 31 | Total sample = 10 |

### 3.6 Instruments and Data Collection Techniques

Questionnaire and semi structured interview guide are used in collecting relevant data for the study. Pilot test of data collection instruments were made by gathering information from fourteen education managers and fourteen student union representatives in Bahir Dar University. Adjustments were made based on comments from these piloted respondents. Then the adjusted questionnaire were duplicated and used to collect data from all faculty deans and institute/ school directors and student union representatives of ten sampled universities.

Moreover, the researcher prepared interview guide and collected comments on items of the interview guide from six senior instructors and six senior students of Bahir Dar University. Then interviews were conducted with ten senior instructors and ten senior students of the sampled universities. During interviews, the researcher planned to tape record in order to listen to information collected again and again for clear understanding that helped him for data analysis and in order not to lose data. But almost all interviewees did not agree to be tape recorded as a result he took notes of their responses without tape recording. Therefore, questionnaires and interviews were employed as data collection instruments in conducting this research.

### 3.7 Reliability and Validity of Instruments

#### 3.7.1 Reliability

Reliability is concerned with the strength of data gathering instruments whether or not it will produce consistent findings at different times and under different conditions (Saunders et al. 2007). Moreover, Cooper & Schindler (2003) explained that reliability means among other things, consistency as it relates to measurement, experiment, or observation.

Cooper & Schindler (2003) stated that there must be evidence of consistency to show the accuracy and precision of a measurement procedure or measurement instruments. A measure is reliable to the degree that it provides consistent results; hence it is a necessary contributor to validity, but not sufficient condition for validity. Reliability estimates the degree to which a measurement is free of random or unstable error. Furthermore, Cooper & Schindler (2003) suggest that the distinctions of time and condition provide basis for frequently used perspectives on reliability because of three basic factors, such as stability, equivalence, and internal consistency. Stability is the ability to provide the same results when the same test is administered two or more times to same subjects over an interval of 6 months or less. Equivalence shows the degree to which alternative forms of the same measures are used to produce the same or similar results. Internal consistency shows the degree to which instrument items are homogeneous and reflect the same underlying construct (Cooper & Schindler 2003).

Reliability of measures for this study was considered at data gathering instruments design stage. The researcher correlated responses to each question in data gathering instruments with those to other questions in the instruments. This would therefore measure consistency of responses across either all questions or group of questions from his data gathering instruments. The researcher also carefully used check questions that offer some sense of reliability within his data gathering instruments through comparing responses to alternative forms of the same question or group of questions (Saunders et al. 2007).

The researcher calculated the Cronbach's Alpha of the constructs by using SPSS version 20.00 on the responses obtained from the piloted respondents. The obtained results were more than 0.70. This indicates that reliability of the constructs were acceptable. Similarly the researcher continued calculating the Cronbach's Alpha of the constructs before analyzing the collected data as shown in section 4.3 of chapter 4 of this study to see the reliability of the constructs.

### 3. 7.2 Validity of Data- Collection Instruments

Blumberg, Cooper & Schindler (2005) explained that when discussing the validity of data gathering tools, researchers refer to the following: Face validity, content validity and construct validity.

#### 3. 7.2.1 Face Validity

This indicates what items in the data gathering tools appear to measure the construct under study. It is possible that any given item can appear to be measuring one thing when in reality it is measuring another (Babbie 2002). When constructing questionnaire, the researcher tried to consider face validity of the items included. He took advice of his colleagues, piloted the study, acted upon comments by his thesis supervisor and UNISA College of Education ethics clearance committees' comments whether items in his data gathering tools appear to measure the subject matter under consideration.

#### 3. 7.2.2 Content Validity

Content validity refers to the extent to which measurement devices, in this case measurement questions in data gathering tools, provide adequate coverage of investigative questions (Saunders et al. 2007). In his questionnaire judgment of what is 'adequate coverage' were made through careful definition of the topic through literature review using Deming's PDSA cycle, prior informal discussion with his colleagues and then discussion with his thesis supervisor. The researcher's colleagues at his work place judged each item of the questionnaire to be essential, useful but not essential or not necessary in assessing the quality management of education. The essential items in the questionnaire that were obtained from the colleagues and the thesis supervisor were retained. In this way items of the questionnaire were made to address that assessment devices adequately measure major dimensions of education quality management in Ethiopian public universities in line with the basic research questions raised in this study.

### 3. 7.2.3 Construct Validity

Construct validity refers to the extent to which measurement questions actually measure the presence of those constructs that the researcher intended them to measure. This will normally be used when referring to constructs such as attitude scales, aptitude and personality tests (Saunders et al. 2007). For the items in this research's data gathering tools were pilot tested and commented by the researcher's colleagues and his thesis supervisor; the researcher strongly believe that the items were appeared to measure the general construct that they purport to measure.

## 3.8 Research Ethics

The entire process and procedures of this study were designated in due consideration of ethical principles that social science researchers should follow. The research report was written accurately with appropriate interpretation of results free from data fabrication. The researcher avoided plagiarism and personal bias on his connection with other researchers and their work.

The researcher followed proper procedures to secure permission from university officials and other concerned bodies to conduct the study, without giving any false impressions about himself and his research. Ethical clearance certificate has been obtained by fulfilling the required procedures from UNISA College of Education research ethics clearance committee before collecting data (see appendix I). Then up on acquisition of ethical clearance certificate the researcher also obtained permission letter from Bahir Dar University's research and community service vice president office to enter his research sites (see appendix II).

In designing data gathering instruments the researcher also clearly showed ethical issues at the top of instruments. Moreover, recording materials were not used for interviews due to the

interviewees' unwillingness. The questionnaires were coded and names of the participants were not taken. Therefore, the ethical issues that were applied in this research with research participants include informed consent, privacy, anonymity and confidentiality (Saunders et al. 2007; Sarantakos 1998).

### 3.9 Methods of Data Analysis and Interpretation

In this study, sequential mixed method of data analysis was employed. First quantitative data and then qualitative data were analysed and interpreted. To analyze data obtained from questionnaires both descriptive and inferential statistics were used. The descriptive statistics used were means, modes, frequencies and percentage distributions and the inferential statistical test employed were Spearman's rho correlation and chi-square distributions. The statistical package for social sciences (SPSS) version 20.00 was used for computing statistical data obtained through questionnaires. The significance level of alpha = 0.05 was used for the study.

The strenght of relationship between quantitative variables were also tested. The strength of relationship between variables is determined as small for rho = 0.10 to 0.29, medium for rho = 0.30 to 0.49 and large for rho = 0.50 to 1.00 (Pallant 2007: 147).

To describe quantitative data obtained through questionnaires, information obtained from interviews and open ended items in the questionnaires were also analyzed qualitatively using themes of frequently obtained responses (Babbie 2010).

## 3.10 Chapter Summary

In this chapter the researcher has discussed his research methodology. He has explained that, in his research he used pragmatism research paradigm. Mixed research approach was used to conduct this study. Data for the study were collected from education managers (deans/directors and departmental heads) and from student union representatives of ten public universities in Ethiopia. Moreover, interviews were held with ten senior instructors and ten senior students to get detailed information on education quality management practices in their university.

Questionnaires and interviews were used as instruments of data collection. Reliability and validity of data collection instruments were discussed. Moreover, ethical procedures followed in data collection were discussed in this chapter.

To analyze data obtained from questionnaires both descriptive and inferential statistics were employed. The descriptive statistics used were means, modes, frequencies and percentage distributions and the inferential statistical tests used were correlation and chi-square distributions. The statistical package for social sciences (SPSS version 20.00 was used for computing statistical data obtained through questionnaires. The significance level of alpha = 0.05 was used for the study. The researcher also discussed that the strenght of relationship between quantitative variables were also tested. In addition to explaining quantitative results, data obtained from interviews and open ended items in the questionnaire were analyzed using thematic analytical technique.

In the next chapter the researcher will present and analyze data that has been collected from education managers, student union representatives, senior instructors and senior students of the ten sampled public universities in Ethiopia.

# Chapter Four

## 4. Data Presentation and Analysis

### 4.1 Introduction

The aim of this chapter is to present data descriptions and findings from both the questionnaire and interviews on education quality management of Ethiopian public universities. Descriptive analysis was conducted to describe and summarise the data obtained from the samples used for this study. Reliability statistics for constructs, means and modes of each item, frequencies and percentage distributions, chi-square test results and correlations (Spearman rho) were used to portray the respondents' responses. The tool used to assist the analysis was Statistical Package for Social Sciences (SPSS). There are two sections of this chapter. The first section presents background information about research participants where as the second part presents data analysis from the questionnaire and the interviews on the main constructs of the study.

The questionnaire data were divided into ten parts. Part one was about respondents' background information. Part two explored identification of quality education, part three deals with considering customers' needs, and part four examined planning for quality education. Part five investigated implementation of plans and part six was about performance tracking. Part seven dealt with teaching methodologies as education quality management strategy, part eight was about taking actions, part nine explored performance improvement while part ten was general questions about education quality management in Ethiopian public universities.

The whole parts, except part one and part ten, consisted of close ended questions that help to explore education quality management practices in Ethiopian public universities, asking the participants to rate their level of agreement with forty-eight variables (questions number 7-54) based on the five-point Likert Scale. The data for these questions and discussions that follow

consisted of nine core constructs on education quality management namely; identification of quality education, considering customers' needs, planning for quality education, implementation of quality education plans, performance tracking, teaching methodologies as education quality management strategy, taking actions and performance improvement. The dependent variables are planning for quality education, implementation of plans and performance improvement and the independent variables are identification of quality education, considering customers' needs, Performance tracking, quality management strategies used and taking actions.

The researcher used Spearman rho correlation, in order to address the following questions:

Is there a significant relationship between identification of quality education and planning for quality education?

Is there a significant relationship between identification of quality education and performance improvement?

Is there a significant relationship between considering customers' needs and institutional planning for quality education?

Is there a significant relationship between considering customers' needs and performance improvement?

Is there a significant relationship between performance tracking and implementation of plans?

Is there a significant relationship between performance tracking and performance improvement?

Is there a significant relationship between quality management strategies and implementation of plans?

Is there a significant relationship between quality management strategies and performance improvement?

Is there a significant relationship between taking actions and implementation of plans?

Is there a significant relationship between taking actions and performance improvement in Ethiopian public universities?

Hypotheses are set for each construct to see a relationship between independent and dependent variables. Then correlations (Spearman rho) were used to see relationship between the independent and dependent variables of this study. Below are hypothesis for each core constructs and the findings.

Research Model

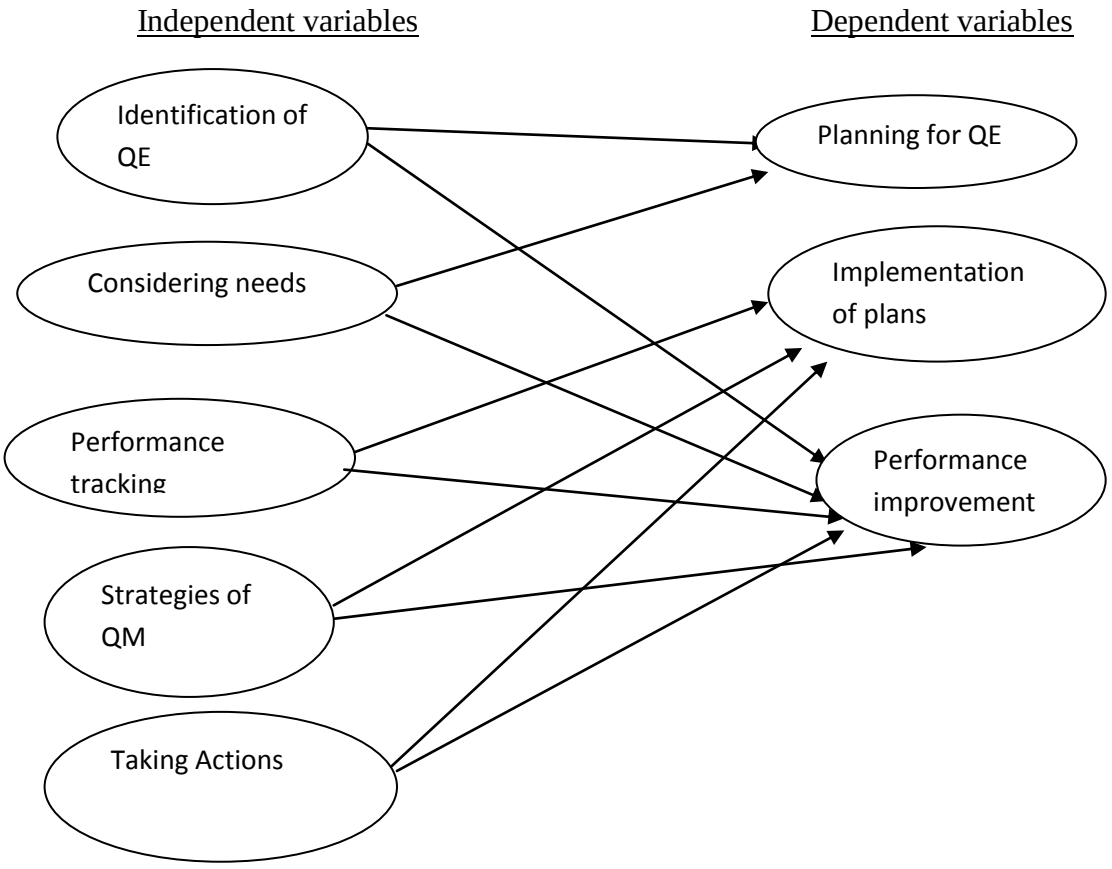


Figure 2: Research Model

## Hypotheses of the study

1. H0: There is no strong relationship between identification of quality education and planning for quality education

2. Ho: There is no strong relationship between identification of quality education and performance improvement.

3. Ho: There is no strong relationship between considering customers' needs and institutional planning for quality education.

4. Ho: There is no strong relationship between considering customers' needs and performance improvement.

5. Ho: There is no strong relationship between performance tracking and implementation of plans.

6. Ho: There is no strong relationship between performance tracking and performance improvement.

7. Ho: There is no strong relationship between quality management strategies and implementation of plans.

8. Ho: There is no strong relationship between quality management strategies and performance improvement.

9. Ho: There is no strong relationship between taking actions and the implementation of plans.

10. Ho: There is no strong relationship between taking actions and performance improvement.

Before presenting relationships between the independent and dependent variables of this study, the researcher first discussed the descriptive statistical analysis of the collected data.

### 4.2 Information about Respondents and the Questionnaire They Worked on

The basic purpose of this study was to gather background information on the Ethiopian public universities as well as data on the independent and dependent variables. The main themes of the questionnaire addressed some general background information about Ethiopian public universities e.g. Name of universities, educational level of respondents, their academic

disciplines, sex of respondents, experience of respondents in their institutions and experience of respondents on current positions they hold as dean/director/departmental head and/or student union representative.

The questionnaire was designed to collect data from ten sampled public universities out of the thirty one. The targeted respondents were faculty/school/college deans/directors, departmental heads and student union representatives. Targeting these respondents in universities was done to ensure that the respondents had institutional knowledge in general as well as knowledge on quality management in particular. The inquiry was performed in October and November 2013. The questionnaire was designed to be self-explanatory and respondents could complete it themselves. The final questionnaire consisted of 56 questions (see Appendix III). Questions predominantly required the application of 5-point Likert scale, e.g. from 'Strongly Disagree' (1) to 'Strongly Agree' (5). In addition, eight open ended questions required written responses. Each questionnaire was accompanied by a cover letter explaining the purpose of the study.

A total of two hundred fifty (250) individual respondents representing ten Ethiopian public universities were asked to complete the questionnaire. The total number of filled questionnaires collected was one hundred eighty two (182) from individuals representing these ten Ethiopian public universities. Then, questionnaires were checked for completeness and usefulness of all essential information. Finally, questionnaires that were not properly answered by respondents were excluded from the analysis. The total excluded questionnaires were twelve (12). Therefore, only 170 valid questionnaires were used for analysis yielding a response rate of 68% of the respondents included in this study. See table 4.1 below.

**Table 4.1: Individual and institutional responses (number and %)**

| | 1st generation University | | 2nd generation University | | 3rd generation University | | Gross Total | |
|---|---|---|---|---|---|---|---|---|
| | **No.** | **%** | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Deans/heads** | 42 | 24.71 | 40 | 23.53 | 42 | 24.71 | **124** | **72.94** |
| **Students** | 15 | 8.82 | 16 | 9.41 | 15 | 8.82 | **46** | **27.06** |
| **Gross Total** | 57 | 33.53 | 56 | 32.94 | 57 | 33.53 | **170** | **100** |

Table 4.1 shows that 72.94% of the respondents were faculty/college/school deans/directors and/or departmental heads and the remaining 27.06 % were student union representatives of Ethiopian public universities. Fortunately, the sampled ten universities were located in the eight different regions of Ethiopia including Addis Ababa, Amhara, Southern nations and nationalities, Dire Dawa, Tigray, Oromia, Afar and Benishangul Gumuz. The universities taken were Addis Ababa Univeristy, Bahir Dar University, Debre Tabor University, Hawassa University, Dilla University, Dire Dawa University, Aksum University, Ambo University, Semera University and Asossa University. Addis Ababa, Bahir Dar and Hawassa Universities are the first generation/senior universities; Aksum, Dire Dawa, Dilla and Semera Universities are the second generation universities while Ambo, Asossa and Debre Tabor Universities are the third generation universities in Ethiopia.

This figure implies that distribution of the responding universities largely follows those of all public universities in Ethiopia. Concerning the year of generation and location, the respondents were taken from all categories of the total population of Ethiopian public universities.

To address qualitative data twenty in-depth interviews were made with ten senior instructors and ten senior students.

All in all, the researcher can conclude that this sample more or less in all aspects fully reflects the total population of public universities in Ethiopia in 2013.

## 4.3 Descriptive Statistical Analysis and Chi-square Test Results of Data Obtained through Questionnaire

### 4.3.1 Identification of Quality Education

This section provides a descriptive overview of the main study results with regard to identification of quality education in Ethiopian public universities. Before proceeding to the analysis of each of the items of identification of quality education, reliability of this construct is calculated using SPSS version 20.00. The result obtained is reported in the following table.

**Table 4.2: Reliability Statistics for Identification of Quality Education**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .788 | .786 | 5 |

This table indicates that reliability of the construct identification of quality education as measured by the five items is acceptable, because the obtained Cronbach's Alpha 0.788 is greater than the standard Cronbach's Alpha that is 0.70.

Next let us see the items' mean and mode for the identification of quality education. Table 4.3 below shows this result.

Table 4.3: Items' Mean and Mode for Identification of Quality Education

| | Mean | Mode | Std. Deviation |
|---|---|---|---|
| Meaning of quality education has been stated in writing | 3.3176 | 4.00 | 1.25186 |
| There is a written policy statement or manual to attain planned quality education | 3.3882 | 4.00 | 1.26953 |
| Benchmarks have been identified that define the highest level of quality within universities | 2.8647 | 2.00 | 1.19637 |
| Activities required to achieve quality education has been identified | 3.6000 | 4.00 | 1.07912 |
| Team has been established to carry out education quality management activities | 3.7765 | 4.00 | 1.06451 |

The maximum mean for this construct is 3.78 that is obtained for the item "my institution has established team to carry out education quality management activity." The minimum mean is for the item which reads as "my institution has identified benchmarks." The modes for all of the items are 4.00 except for the item "my institution has identified benchmarks". This indicates that most of the institutions do not have identified benchmarks to improve their performances. The following table shows cross tabulation, frequencies and percentages of responses obtained from the three generations of universities in Ethiopia.

| Table 4.4: Identification of Quality Education Vs University Cross Tabulation | | | | | | |
|---|---|---|---|---|---|---|
| | | | University | | | Total |
| | | | First generation | Second generation | Third generation | |
| Ident of QE | Disagree or Strongly disagree | Count | 8 | 13 | 5 | 26 |
| | | % within Ident of QE | 30.8% | 50.0% | 19.2% | 100.0% |
| | | % within University | 14.0% | 23.2% | 8.8% | 15.3% |
| | | % of Total | 4.7% | 7.6% | 2.9% | 15.3% |
| | Undecided | Count | 29 | 22 | 16 | 67 |
| | | % within Ident of QE | 43.3% | 32.8% | 23.9% | 100.0% |
| | | % within University | 50.9% | 39.3% | 28.1% | 39.4% |
| | | % of Total | 17.1% | 12.9% | 9.4% | 39.4% |
| | Agree or strongly agree | Count | 20 | 21 | 36 | 77 |
| | | % within Ident of QE | 26.0% | 27.3% | 46.8% | 100.0% |
| | | % within University | 35.1% | 37.5% | 63.2% | 45.3% |
| | | % of Total | 11.8% | 12.4% | 21.2% | 45.3% |
| Total | | Count | 57 | 56 | 57 | 170 |
| | | % within Ident of QE | 33.5% | 32.9% | 33.5% | 100.0% |
| | | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

The above table shows that 30.8%, 50.0% and 19.2% of the entire respondents who replied as either disagree or strongly disagree that their institution makes identification of quality education were from the first, second and third generation universities respectively. Moreover, 14% of the first generation, 23.2% of the second generation and 8.8% of the third generation universities either disagree or strongly disagree that their institutions make identification of quality education. The majority of the entire respondents (45.3%) either agree or strongly agree that their institution makes identification of quality education. Comparing the three groups of universities the majority (63.2%) of third generation universities either agree or strongly agree on this issue as compared to the first (35.1%) and second (37.5%) generation universities. To see whether this difference is significant or not chi-square test is employed. The result of the chi-square test is shown in table 4.5 below.

| Table 4.5: Chi-Square Tests for Identification of Quality Education | | | |
|---|---|---|---|
| | Value | Df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 13.781[a] | 4 | .008 |
| Likelihood Ratio | 13.519 | 4 | .009 |
| Linear-by-Linear Association | 4.046 | 1 | .044 |
| N of Valid Cases | 170 | | |
| a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.56. | | | |

This Chi-square test for independence table indicated that there is a significant difference between proportion of universities generation and proportion of their making identification of quality education; (chi-square =13.78, df =4 P= .008). This shows that there is significant relationship between generation of universities and their making identification of quality education.

### 4.3.2 Considering Customers' Needs

Table 4.6 below shows that reliability of the construct considering customers' needs as measured by six items is acceptable. Reliability of this construct is calculated using SPSS version 20.00.

| Table 4.6: Reliability Statistics for considering customers' needs | | |
|---|---|---|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .845 | .847 | 6 |

Table 4.7 below shows items' mean and mode for the construct considering customers' needs. The maximum mean for this construct is 3.57 that is obtained for the item "my institution is

planning to meet or exceed customers' needs." The minimum mean is for the item which reads as "customers are satisfied with quality management implementation." The minimum mode obtained is 2.00 which is the mode obtained for the item "My institution analyses and prioritises customers needs". This indicates that most institutions do not analyze and prioritize their customers' needs.

**Table 4.7:** Items' Mean and Mode for Considering Customers' Needs

| | Mean | Mode |
|---|---|---|
| Understanding needs of customers quality plan is set | 3.2882 | 4.00 |
| Plans are prepared to meet or exceed needs of customers | 3.5706 | 4.00 |
| Plans are based on analysis of future customer requirements | 3.2353 | 4.00 |
| While planning customers' needs are analysed and prioritised | 3.0647 | 2.00 |
| Every possible effort is made to provide education that will best meet customers' needs | 3.3941 | 4.00 |
| Customers are satisfied with quality management implementation | 3.0000 | 3.00[a] |

The frequency distributions, percentages and the cross tabulation of these items are shown in the following table.

**Table 4.8: Considering Customers' Needs Vs University Cross Tabulation**

| | | | University | | | Total |
|---|---|---|---|---|---|---|
| | | | First generation | Second generation | Third generation | |
| | Disagree or strongly disagree | Count | 13 | 15 | 5 | 33 |
| | | % within customers' needs | 39.4% | 45.5% | 15.2% | 100.0% |
| | | % within University | 22.8% | 26.8% | 8.8% | 19.4% |
| | | % of Total | 7.6% | 8.8% | 2.9% | 19.4% |
| | Undecided | Count | 24 | 22 | 15 | 61 |
| | | % within customers' needs | 39.3% | 36.1% | 24.6% | 100.0% |
| | | % within University | 42.1% | 39.3% | 26.3% | 35.9% |
| | | % of Total | 14.1% | 12.9% | 8.8% | 35.9% |
| | Agree or strongly agree | Count | 20 | 19 | 37 | 76 |
| | | % within customers' needs | 26.3% | 25.0% | 48.7% | 100.0% |
| | | % within University | 35.1% | 33.9% | 64.9% | 44.7% |
| | | % of Total | 11.8% | 11.2% | 21.8% | 44.7% |
| Total | | Count | 57 | 56 | 57 | 170 |
| | | % within customers' needs | 33.5% | 32.9% | 33.5% | 100.0% |
| | | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

The above table shows that 39.4%, 45.5% and 15.2 % of the entire respondents who replied as either disagree or strongly disagree that their institution considers customers' needs were from the first, second and third generation universities respectively. Moreover, 22.8 % of the first generation, 26.8% of the second generation and 8.8% of the third generation universities either disagree or strongly disagree that their institutions consider customers' needs. Majority of the entire respondents (44.7%) either agree or strongly agree that their institution considers customers' needs. Comparing the three groups of universities the majority (64.9%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (35.1%) and second generation (33.9%) universities. To see whether this difference

is significant or not the chi-square test is employed. The result of the chi-square test is shown in table 4.9 below.

**Table 4.9: Chi-Square Tests for Customers' needs**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 15.321[a] | 4 | .004 |
| Likelihood Ratio | 15.693 | 4 | .003 |
| Linear-by-Linear Association | 7.784 | 1 | .005 |
| N of Valid Cases | 170 | | |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.87.

This Chi-square test for independence table indicated that there is a significant difference between proportion of universities generation and proportion of their considering customers' needs; (chi-square =15.32, df =4 P= .004). This indicates that there is significant relationship between generation of universities and their making consideration of their customers' needs.

### 4.3.3 Planning for Quality Education

Reliability of the construct planning for quality education as measured by five items is acceptable because the calculated Cronbach's Alpha, 0.832 is greater than the standard Cronbach's Alpha that is 0.70. This finding is reported in table 4.10 below.

**Table 4.10: Reliability Statistics of planning for quality education**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .832 | .835 | 5 |

**What procedures do Ethiopian public universities follow to plan for quality education?**

Following are items' mean and mode of planning for quality education.

**Table 4. 11: Items' Mean and Mode of Planning for Quality Education**

| | Mean | Mode | Std. Deviation |
|---|---|---|---|
| Institutions collect data to identify problems and develop plans for improvement | 3.3118 | 4.00 | 1.31553 |
| My institution specifies measures for evaluating plans | 2.9941 | 4.00 | 1.17416 |
| Plans are based on analysis of data about competitors | 3.1176 | 4.00 | 1.15037 |
| My institution measures whether or not it has achieved its goals | 3.2000 | 4.00 | 1.21918 |
| Processes are goal oriented with specific measurable outcomes | 3.2000 | 4.00 | 1.19466 |

The maximum mean for this construct is 3.31 obtained for the item "my institution collects data to identify problems and develop plans for improvement". The minimum mean is for the item "my institution specifies measures for evaluating plans." The modes for all of the items are 4.00. This indicates that most respondents have agreed on the items raised to measure their planning for quality education.

Table 4.12 below shows cross tabulation, frequencies and percentages of responses obtained from the three generations of universities in Ethiopia. This table reveals that 38.2%, 47.1% and 14.7% of the entire respondents who replied as either disagree or strongly disagree that their institution makes planning for quality education were from the first, second and third generation universities respectively. Moreover, 22.8% of the first generation, 28.6% of the second generation and 8.8% of the third generation universities either disagree or strongly disagree that their institutions make planning for quality education. Majority of the entire respondents 43.5% were undecided on the issue that their institution makes planning for quality education. Comparing the three groups of universities the majority (56.1%) of third generation

universities either agree or strongly agree on this issue as compared to the first generation (28.1%) and second generation (25.0%) universities.

**Table 4.12: Planning for QE Vs University Cross Tabulation**

| | | University | | | Total |
|---|---|---|---|---|---|
| | | First generation | Second generation | Third generation | |
| Disagree or strongly disagree | Count | 13 | 16 | 5 | 34 |
| | % within Planning for QE | 38.2% | 47.1% | 14.7% | 100.0% |
| | % within University | 22.8% | 28.6% | 8.8% | 20.0% |
| | % of Total | 7.6% | 9.4% | 2.9% | 20.0% |
| Undecided | Count | 28 | 26 | 20 | 74 |
| | % within Planning for QE | 37.8% | 35.1% | 27.0% | 100.0% |
| | % within University | 49.1% | 46.4% | 35.1% | 43.5% |
| | % of Total | 16.5% | 15.3% | 11.8% | 43.5% |
| Agree or strongly agree | Count | 16 | 14 | 32 | 62 |
| | % within Planning for QE | 25.8% | 22.6% | 51.6% | 100.0% |
| | % within University | 28.1% | 25.0% | 56.1% | 36.5% |
| | % of Total | 9.4% | 8.2% | 18.8% | 36.5% |
| Total | Count | 57 | 56 | 57 | 170 |
| | % within Planning for QE | 33.5% | 32.9% | 33.5% | 100.0% |
| | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

To see whether this difference is significant or not the chi-square test is employed. The result of the chi-square test is shown in table 4.13 below.

**Table 4.13: Chi-Square Tests of Planning for QE**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 16.496[a] | 4 | .002 |
| Likelihood Ratio | 16.741 | 4 | .002 |
| Linear-by-Linear Association | 7.675 | 1 | .006 |
| N of Valid Cases | 170 | | |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.20.

This Chi-square test for independence table indicates that there is a significant difference between proportion of universities generation and proportion of their planning for quality education; (chi-square =16.496, df =4 P= .002). This reveals that there is a significant relationship between generation of universities and their planning for quality education.

### 4.3.4 Implementation of Quality Education Plans

This section provides a descriptive summary of the main study results with regard to implementation of quality education plans in Ethiopian public universities. Before proceeding to the analysis of each of the items of implementation of quality education plans, reliability of this construct is calculated using SPSS. The result obtained is given in table 4.14 below.

**Table 4.14:Reliability Statistics for implementation of quality education plans**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .911 | .911 | 9 |

This table indicates that reliability of the construct implementation of quality education plans as measured by nine items is acceptable because their obtained Cronbach's Alpha result 0.911 is greater than the standard Cronbach's Alpha that is 0.70.

**How do Ethiopian public universities implement the quality education plans?**

The items' mean and mode for implementation of quality education plans is shown below in Table 4.15.

**Table 4. 15: Items' Mean and Mode for Plans Implementation of QE**

| | Mean | Mode | Std. Deviation |
|---|---|---|---|
| Educational process changes are tested on small scale | 2.9059 | 2.00 | 1.23675 |
| Data are systematically collected for evaluation to improve QE | 3.2941 | 4.00 | 1.27631 |
| Every day activities are guided to achieve goals | 3.1059 | 2.00[a] | 1.22134 |
| Has quality system that requires all staff and students to be involved | 3.0529 | 4.00 | 1.22721 |
| Makes specific commitment to quality | 3.3235 | 4.00 | 1.07474 |
| To achieve improvements uses QM as important mgt method | 3.4176 | 4.00 | 1.19503 |
| QM implementation has become a social movement | 3.1765 | 4.00 | 1.19344 |
| Employee satisfaction and empowerment is achieved due to QM | 2.9706 | 2.00 | 1.25659 |
| Rationalized the existing work processes with a standard | 3.2118 | 4.00 | 1.17261 |

The maximum mean for this construct is 3.42 obtained for the item "to achieve improvements my institution uses quality management as important management method." The minimum mean is for the item which reads as follows "educational process changes are tested on small scale in my institution." The modes for six items are 4.00 and it is 2.00 for three items. This indicates that respondents have various views on implementation of plans variables in Ethiopian public universities. The following table shows the cross tabulation and frequencies and percentages of responses obtained from the three generations of universities in Ethiopia.

**Table 4.16: Plans implementation Vs University Cross tabulation**

| | | University | | | Total |
|---|---|---|---|---|---|
| | | First generation | Second generation | Third generation | |
| Disagree or strongly disagree | Count | 15 | 21 | 5 | 41 |
| | % within plans implementation | 36.6% | 51.2% | 12.2% | 100.0 % |
| | % within University | 26.3% | 37.5% | 8.8% | 24.1% |
| | % of Total | 8.8% | 12.4% | 2.9% | 24.1% |
| Undecided | Count | 27 | 19 | 17 | 63 |
| | % within plans implementation | 42.9% | 30.2% | 27.0% | 100.0 % |
| | % within University | 47.4% | 33.9% | 29.8% | 37.1% |
| | % of Total | 15.9% | 11.2% | 10.0% | 37.1% |
| Agree or strongly agree | Count | 15 | 16 | 35 | 66 |
| | % within plans implementation | 22.7% | 24.2% | 53.0% | 100.0 % |
| | % within University | 26.3% | 28.6% | 61.4% | 38.8% |
| | % of Total | 8.8% | 9.4% | 20.6% | 38.8% |
| Total | Count | 57 | 56 | 57 | 170 |
| | % within plans implementation | 33.5% | 32.9% | 33.5% | 100.0 % |
| | % within University | 100.0% | 100.0% | 100.0% | 100.0 % |
| | % of Total | 33.5% | 32.9% | 33.5% | 100.0 % |

The above table shows that 36.6 %, 51.2 % and 12.2 % of the entire respondents who replied as either disagree or strongly disagree that their institution implement plans for quality education were from the first, second and third generation universities respectively. Moreover, 26.3% of the first generation, 37.5% of the second generation and 8.8% of the third generation universities either disagree or strongly disagree that their institutions implement plans for quality education. The majority of the entire respondents (38.8%) either agree or strongly agree that their institution implements plans for quality education. Comparing the three groups of universities the majority (53.0%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (22.7%) and second generation (24.2%)

universities. To see whether this difference is significant or not chi-square test is employed. The result of the chi-square test is shown in table 4.17 below.

**Table 4.17: Chi-Square Tests for Plans implementation**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 23.725[a] | 4 | .000 |
| Likelihood Ratio | 24.172 | 4 | .000 |
| Linear-by-Linear Association | 10.381 | 1 | .001 |
| N of Valid Cases | 170 | | |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.51.

This Chi-square test for independence table indicates that there is a significant difference between proportion of universities generation and proportion of their implementation of plans for quality education; (chi-square =23.73, df =4 P= .000). This shows that there is a significant relationship between generation of universities and their implementation of quality education plans.

### 4.3.5 Performance Tracking

Table 4.18 below indicates that reliability of the construct performance tracking of quality education as measured by six items is acceptable.

**Table 4.18:Reliability Statistics for performance tracking**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .881 | .878 | 6 |

**How do the Ethiopian public universities know that they provide quality education?**

The maximum mean for performance tracking construct is 3.41 obtained for the item "my institution receives regular feedback about how satisfied the students." The minimum mean is for the item which reads as follows "my institution evaluates quality of educational programs in relation to benchmarks."The modes of the items vary from 2.00 to 4.00. This indicates that most respondents have various views on the items that measure the performance tracking of quality education in Ethiopian public universities. See table 4.19 below.

**Table 4.19: Items' Mean and Mode for Performance Tracking**

| | Mean | Mode | Std. Deviation |
|---|---|---|---|
| There is a system for two way communication | 3.2706 | 4.00 | 1.22969 |
| Regularly collects data on satisfaction levels | 2.8588 | 2.00 | 1.33370 |
| Receives regular feedback about how satisfied the students | 3.4118 | 4.00 | 1.15430 |
| Receives regular feedback about how satisfied the employers | 2.7471 | 3.00 | 1.31923 |
| Senior education managers do more than just talking about quality | 3.0353 | 2.00 | 1.30041 |
| Evaluates quality of educational programs in relation to benchmarks | 2.8471 | 2.00 | 1.32349 |

Table 4.20 below shows that 44.3%, 44.3% and 11.5% of the entire respondents who replied as either disagree or strongly disagree that their institution makes performance tracking for quality education were from the first, second and third generation universities respectively. In addition, 23.0%, 23.0% and 54.1% of the entire respondents who replied as either agree or strongly agree that their institution makes performance tracking were from the first, second and third generation universities respectively. An equal percent of the entire respondents (35.9 %) disagree or strongly disagree and agree and strongly agree on performance tracking of quality education. Comparing the three groups of universities the majority (57.9%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (24.6%) and second generation (25.0%) universities.

| Table 4.20: Performance Tracking Vs University Cross Tabulation | | | | | |
|---|---|---|---|---|---|
| | | University | | | Total |
| | | First generation | Second generation | Third generation | |
| Disagree or strongly disagree | Count | 27 | 27 | 7 | 61 |
| | % within Performance tracking | 44.3% | 44.3% | 11.5% | 100.0% |
| | % within University | 47.4% | 48.2% | 12.3% | 35.9% |
| | % of Total | 15.9% | 15.9% | 4.1% | 35.9% |
| Undecided | Count | 16 | 15 | 17 | 48 |
| | % within Performance tracking | 33.3% | 31.2% | 35.4% | 100.0% |
| | % within University | 28.1% | 26.8% | 29.8% | 28.2% |
| | % of Total | 9.4% | 8.8% | 10.0% | 28.2% |
| Agree or strongly agree | Count | 14 | 14 | 33 | 61 |
| | % within Performance tracking | 23.0% | 23.0% | 54.1% | 100.0% |
| | % within University | 24.6% | 25.0% | 57.9% | 35.9% |
| | % of Total | 8.2% | 8.2% | 19.4% | 35.9% |
| Total | Count | 57 | 56 | 57 | 170 |
| | % within Performance tracking | 33.5% | 32.9% | 33.5% | 100.0% |
| | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

To see whether the difference shown in table 4.20 above is significant or not chi-square test is employed. The result of the chi-square test is shown in table 4.21 below.

| Table 4.21: Chi-Square Tests for Performance Tracking | | | |
|---|---|---|---|
| | Value | Df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 24.992[a] | 4 | .000 |
| Likelihood Ratio | 26.871 | 4 | .000 |
| Linear-by-Linear Association | 18.228 | 1 | .000 |
| N of Valid Cases | 170 | | |
| a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.81. | | | |

This Chi-square test for independence table indicated that there is a significant difference between proportion of universities generation and their proportion of performance tracking for quality education ; (chi-square =24.99, df =4 P= .000). This reveals that there is significant association/relationship between generation of universities and their making identification of quality education.

### 4.3.6 Performance Improvement

This section provides a descriptive overview of the main study results about performance improvement in Ethiopian public universities. Before proceeding to the analysis of each of the items of performance improvement, the reliability of this construct is calculated using SPSS. The result obtained is reported in the following table.

**Table 4. 22: Reliability Statistics for performance improvement**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .779 | .807 | 6 |

This table indicates that reliability of the construct performance improvement as measured by six items is acceptable. The obtained Cronbach's Alpha result 0.779 is greater than the standard Cronbach's Alpha that is 0.70.

Accordingly, Table 4.23 below shows the result of the items' mean and mode for performance improvement.

| Table 4.23: Items' Mean and Mode for Performance Improvement | | | |
|---|---|---|---|
| | Mean | Mode | Std. Deviation |
| Workers receive immediate feedback on their performance | 3.1353 | 4.00 | 1.31421 |
| More numbers of students are satisfied with the teaching learning process | 3.3235 | 5.00 | 1.36570 |
| More numbers of students are able to improve their Cumulative Grade Point Average/CGPA | 3.5235 | 4.00 | 1.88172 |
| More numbers of students are able to produce problem solving research outputs | 3.1529 | 4.00 | 1.19670 |
| More numbers of competent professional graduates are produced | 3.2588 | 4.00 | 1.17823 |
| Institutions Plan, do, study, act for their performance improvement | 3.3294 | 4.00 | 1.21517 |

The maximum mean for this construct is 3.52 obtained for the item "More numbers of students are able to improve their Cumulative Grade Point Average/CGPA". The minimum mean is for the item which reads as follows "In my institution workers receive immediate feedback on their performance." The modes for all of the items are 4.00 except for the item "More numbers of students are satisfied with the teaching learning process in my institution". This indicates that all respondents have agreed on the items raised to measure performance improvements of institutions. The following table shows the cross tabulation and frequencies and percentages of the responses obtained from the three generations of universities in Ethiopia.

**Table 4.24: Performance improvement Vs University Cross Tabulation**

| | | University | | | Total |
|---|---|---|---|---|---|
| | | First generation | Second generation | Third generation | |
| Disagree or strongly disagree | Count | 13 | 18 | 4 | 35 |
| | % within Performance improvement | 37.1% | 51.4% | 11.4% | 100.0% |
| | % within University | 22.8% | 32.1% | 7.0% | 20.6% |
| | % of Total | 7.6% | 10.6% | 2.4% | 20.6% |
| Undecided | Count | 17 | 21 | 20 | 58 |
| | % within Performance improvement | 29.3% | 36.2% | 34.5% | 100.0% |
| | % within University | 29.8% | 37.5% | 35.1% | 34.1% |
| | % of Total | 10.0% | 12.4% | 11.8% | 34.1% |
| Agree or strongly agree | Count | 27 | 17 | 33 | 77 |
| | % within Performance improvement | 35.1% | 22.1% | 42.9% | 100.0% |
| | % within University | 47.4% | 30.4% | 57.9% | 45.3% |
| | % of Total | 15.9% | 10.0% | 19.4% | 45.3% |
| Total | Count | 57 | 56 | 57 | 170 |
| | % within Performance improvement | 33.5% | 32.9% | 33.5% | 100.0% |
| | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

The above table shows that 37.10%, 51.40% and 11.40% of the entire respondents who replied as either disagree or strongly disagree on performance improvement items were from the first, second and third generation universities respectively. Moreover, 47.40% of the first generation, 30.40% of the second generation and 57.90% of the third generation universities either agree or strongly agree on performance improvement items. Majority of the entire respondents (45.3%) either agree or strongly agree on performance improvement items. Comparing the three groups of universities the majority (57.90%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (47.00%) and second generation (30.40%) universities. In addition, the majority (51.40%) of the second generation universities either disagree or strongly disagree on this issue as compared to the first generation (37.10%) and third generation (11.40%) universities. To see whether this difference is significant or not the chi-square test is employed. The result of the chi-square test is shown in table 4.25 below.

| Table 4.25: Chi-Square Tests for Performance improvement | | | |
|---|---|---|---|
| | Value | Df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 14.189[a] | 4 | .007 |
| Likelihood Ratio | 15.619 | 4 | .004 |
| Linear-by-Linear Association | 3.940 | 1 | .047 |
| N of Valid Cases | 170 | | |
| a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.53. | | | |

This Chi-square test for independence table indicates that there is a significant difference between proportion of universities generation and proportion of their performance improvement; (chi-square =14.12, df =4 P= .007). This shows that there is a significant relationship between generation of universities and their performance improvement.

### 4.3.7 Teaching Methodologies as Education Quality Management Strategy

Table 4.26 below shows that reliability of the construct teaching methodologies as quality management strategy as measured by four items is 0.813. This Cronbach's Alpha result is acceptable because it is greater than the standard Cronbach's Alpha that is 0.70.

| Table 4.26: Reliability Statistics for quality management strategies | | |
|---|---|---|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .813 | .814 | 4 |

**What strategies are available for quality management of education in Ethiopian public universities?**

The follows are the items' mean and mode for teaching methodologies as quality management strategy. Table 4.27 below shows this result.

**Table 4.27: Items' Mean and Mode for Teaching Methodologies as Education Quality Management Strategy**

| | Mean | Mode | Std. Deviation |
|---|---|---|---|
| Uses student centred teaching methodologies | 3.9941 | 4.00 | 1.02338 |
| Uses problem based learning | 3.5118 | 4.00 | 1.11599 |
| Uses linking theory to practice | 3.4588 | 4.00 | 1.19221 |
| Uses continuous assessment | 4.1353 | 5.00 | 1.21111 |

The maximum mean for this construct is 4.14 that is obtained for the item "my institution uses continuous assessment as a strategy for education quality management." The minimum mean is obtained for the item which reads thus: "my institution uses linking theory to practice as teaching methodology."The highest frequent responses for all of the items are 4.00 except for the item "my institution uses continuous assessment as a strategy for education quality management". This indicates that most institutions agreed on the items raised to measure teaching methodologies as education quality management strategies. Table 4.28 below presents the cross tabulation, frequencies and percentages of responses obtained from the three generations of universities in Ethiopia.

The table shows that 28.50%, 30.90% and 40.70% of the entire respondents who replied as either agree or strongly agree on the items of teaching methodologies as education quality management strategy were from the first, second and third generation universities respectively. Moreover, 61.40% of the first generation, 67.90% of the second generation and 87.70% of the third generation universities either agree or strongly agree on the items of teaching

methodologies as education quality management strategy. Majority of the entire respondents 72.40% either agree or strongly agree on the items of teaching methodologies as education quality management strategy. Comparing the three groups of universities the majority (87.70%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (61.40%) and second generation (67.90%) universities. In addition, the majority (53.80%) of the second generation universities either disagree or strongly disagree on this issue as compared to the first generation (30.80%) and third generation (15.40%) universities. See table 4.28 below.

**Table 4.28: Teaching Methodologies as Strategy Vs University Cross Tabulation**

| | | University | | | Total |
|---|---|---|---|---|---|
| | | First generation | Second generation | Third generation | |
| Disagree or strongly disagree | Count | 4 | 7 | 2 | 13 |
| | % within Teaching methods as strategy | 30.8% | 53.8% | 15.4% | 100.0% |
| | % within University | 7.0% | 12.5% | 3.5% | 7.6% |
| | % of Total | 2.4% | 4.1% | 1.2% | 7.6% |
| Undecided | Count | 18 | 11 | 5 | 34 |
| | % within Teaching methods as strategy | 52.9% | 32.4% | 14.7% | 100.0% |
| | % within University | 31.6% | 19.6% | 8.8% | 20.0% |
| | % of Total | 10.6% | 6.5% | 2.9% | 20.0% |
| Agree or strongly agree | Count | 35 | 38 | 50 | 123 |
| | % within Teaching methods as strategy | 28.5% | 30.9% | 40.7% | 100.0% |
| | % within University | 61.4% | 67.9% | 87.7% | 72.4% |
| | % of Total | 20.6% | 22.4% | 29.4% | 72.4% |
| Total | Count | 57 | 56 | 57 | 170 |
| | % within Teaching methods as strategy | 33.5% | 32.9% | 33.5% | 100.0% |
| | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

To see whether this difference is significant or not the chi-square test was employed. The result of the chi-square test is shown in table 4.29 below.

| Table 4.29: Chi-Square Tests for Teaching Methods as Strategy | | | |
|---|---|---|---|
| | Value | Df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 13.409[a] | 4 | .009 |
| Likelihood Ratio | 13.778 | 4 | .008 |
| Linear-by-Linear Association | 4.473 | 1 | .034 |
| N of Valid Cases | 170 | | |
| a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is 4.28. | | | |

This chi-square test result violated the assumption of chi-square test which assumes "Minimum expected cell frequency which would be 5 or greater or at least 80% of cells should have expected frequencies of 5 or more."(Pallant 2007: 230). Therefore, it couldn't help the researcher to show whether this difference is significant or not.

### 4.3.8 Taking Actions to Achieve Quality Education

This section provides a descriptive analysis of data about taking actions to achieve quality education in Ethiopian public universities. The reliability of this construct is calculated using SPSS. The result obtained is reported in the following table.

| Table 4.30:Reliability Statistics for Taking Actions | | |
|---|---|---|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .845 | .847 | 7 |

This table indicates that the reliability of the construct taking actions as measured by the seven items is 0.845.

Consequently, let us see the items' mean and mode for taking actions to achieve quality education. Table 4.31 below shows this result.

**Table 4.31: Items' Mean and Mode for Taking actions**

| | Mean | Mode | Std. Deviation |
|---|---|---|---|
| Actions are taken on time in efforts to enhance our institutional system | 3.7118 | 4.00 | 1.27534 |
| Institutions engaged in developing human resources | 3.6824 | 4.00 | 1.15857 |
| Institutions utilized required educational facilities that are relatively up-to-date | 3.5235 | 4.00 | 1.13160 |
| Institutions have harmonized their education quality management strategy | 3.5471 | 4.00 | 1.07726 |
| Institutions communicated their education quality management strategy | 3.5941 | 4.00 | 1.06863 |
| Institutions applied suggestions collected from stake holders, if appropriate | 3.4294 | 4.00 | 1.15552 |
| Institutions are responsible for meeting or exceeding standards in a timely manner | 3.2588 | 4.00 | 1.15797 |

The maximum mean for this construct is 3.71 that is obtained for the item "Actions are taken on time in efforts to enhance our institutional system in my institution." The minimum mean is for the item which reads thus "My institution is responsible for meeting or exceeding standards in a timely manner." The highest frequent responses for all of the items are 4.00. This indicates that most institutions agreed on the items raised to measure taking actions to achieve quality education in Ethiopian public universities.

Table 4.32 below shows the cross tabulation of universities generation and items of taking actions and frequencies and percentages of responses obtained from respondents of the three generations of universities in Ethiopia.

This table reveals that 52.60%, 31.60% and 15.80% of the entire respondents who replied as either disagree or strongly disagree on the items of taking actions were from the first, second and third generation universities respectively. Moreover, 54.40% of the first generation,

55.40% of the second generation and 68.40% of the third generation universities either disagree or strongly disagree that their institutions took actions to achieve quality education. The majority of the entire respondents 59.40% either agree or strongly agree on the items of taking actions to achieve quality education. Comparing the three groups of universities the majority (68.40%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (54.40%) and second generation (55.40%) universities. See the detail in table 4.32 below.

**Table 4.32:Taking Actions Vs University Cross Tabulation**

| | | | University | | | Total |
|---|---|---|---|---|---|---|
| | | | First generation | Second generation | Third generation | |
| | Disagree or strongly disagree | Count | 10 | 6 | 3 | 19 |
| | | % within Take action | 52.6% | 31.6% | 15.8% | 100.0% |
| | | % within University | 17.5% | 10.7% | 5.3% | 11.2% |
| | | % of Total | 5.9% | 3.5% | 1.8% | 11.2% |
| | Undecided | Count | 16 | 19 | 15 | 50 |
| | | % within Take action | 32.0% | 38.0% | 30.0% | 100.0% |
| | | % within University | 28.1% | 33.9% | 26.3% | 29.4% |
| | | % of Total | 9.4% | 11.2% | 8.8% | 29.4% |
| | Agree or strongly agree | Count | 31 | 31 | 39 | 101 |
| | | % within Take action | 30.7% | 30.7% | 38.6% | 100.0% |
| | | % within University | 54.4% | 55.4% | 68.4% | 59.4% |
| | | % of Total | 18.2% | 18.2% | 22.9% | 59.4% |
| Total | | Count | 57 | 56 | 57 | 170 |
| | | % within Take action | 33.5% | 32.9% | 33.5% | 100.0% |
| | | % within University | 100.0% | 100.0% | 100.0% | 100.0% |
| | | % of Total | 33.5% | 32.9% | 33.5% | 100.0% |

To see whether the difference discussed above is significant or not the chi-square test was employed. The result of the chi-square test for independence table indicated that there is no significant difference between proportion of universities generation and their taking actions to achieve quality education; (chi-square =5.65, df =4 P= .227). This reveals that there is no

significant association/relationship between generation of universities and their taking actions. See table 4.33 below.

**Table 4.33:Chi-Square Tests for taking actions**

| | Value | Df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 5.647[a] | 4 | .227 |
| Likelihood Ratio | 5.741 | 4 | .219 |
| Linear-by-Linear Association | 4.670 | 1 | .031 |
| N of Valid Cases | 170 | | |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.26.

## 4.4 Relationship between Independent and Dependent Variables of this study

Is there a strong positive relationship between the three dependent variables (planning for quality education, implementation of plan and performance improvement) and the five independent variables (identification of quality education, considering customers' needs, performance tracking, strategies of education quality management and taking actions) of education quality management?

In this study five independent and three dependent variables have been identified. The following discussion shows the relationship between the dependent and independent variables to answer the above basic question.

### 4.4.1 A Relationship between Identification of Quality Education and Planning for Quality Education

Relationship between identification of quality education and planning for quality education is investigated in Ethiopian public universities context and the obtained result is displayed as follows.

## Hypotheses of the study

1. **Is there a strong relationship between identification of quality education and planning for quality education?**

   H0: There is no strong relationship between identification of quality education and planning for quality education.

Table 4.34 below shows relationship between identification of quality education and planning for quality education in Ethiopian public universities.

**Table 4.34 Correlation between identification of QE and planning for QE**

| | | | Ident of QE | Planning for QE |
|---|---|---|---|---|
| Spearman's rho | Ident of QE | Correlation Coefficient | 1.000 | .676** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Planning for QE | Correlation Coefficient | .676** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between identification of quality education and planning for quality education was investigated using Spearman's rho correlation coefficient. The strength of relationship between variables is determined as small for rho = .10 to .29, medium for rho = .30 to .49 and large for .50 to 1.00 (Pallant 2007: 147). There was a strong positive correlation between the two variables, rho= .676, n= 170, p< .000, with high levels of identification of quality education associated with high level of planning for quality education in Ethiopian public

universities. The coefficient of determination showed that the two variables share 45.70% (.676 x .676= .45697) of their variance. There is much overlap between the two variables. Therefore, the researcher failed to accept the null hypothesis. The finding of this study showed that there is a strong relationship between identification of quality education and planning for quality education.

These findings are in line with and add to the findings obtained in banking industries in Jordan and Fishery Industry in South Sulawesi of Indonesia that revealed the positive relationship between need identification and performance planning (Al-Bashir, Fouad, & Al-Shobaki 2010; Munizu 2013).

### 4.4.2 A Relationship between Identification of Quality Education and Performance Improvement

**Hypotheses of the study**

2. **Is there a strong relationship between identification of quality education and Performance improvement?**

   Ho: There is no strong relationship between identification of quality education and performance improvement.

Table 4.35 below shows a relationship between identification of quality education and performance improvement taking in to account the Ethiopian public universities context.

**Table 4.35 Correlation between identification of QE and performance improvement**

| | | | Ident of QE | Performance improvement |
|---|---|---|---|---|
| Spearman's rho | Ident of QE | Correlation Coefficient | 1.000 | .480** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Performance improvement | Correlation Coefficient | .480** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between identification of quality education and performance improvement was investigated using Spearman's rho correlation coefficient. There was medium positive correlation between the two variables, rho= .480, n= 170, p< .000, with high levels of identification of quality education associated with high level of performance improvement in Ethiopian public universities. The coefficient of determination showed that the two variables share 23.04% (.480 x .480= .2304) of their variance. There is no much overlap between the two variables. Therefore, the researcher accepted the null hypothesis. The finding of this study showed that there is no strong relationship between identification of quality education and performance improvement in Ethiopian public universities.

This finding contradicts with the existing study which proposed that making need identification of what customers of an organization need and working towards filling the identified needs resulted in performance improvement of that organization. Qin Su in his/her study on the relationship between quality management and new product development: evidence from China revealed that there is positive relationship between need identification and performance improvement of manufacturing organizations (Qin Su 2015).

### 4.4.3 A Relationship between Considering Customers' Needs and Institutional Planning for Quality Education

**Hypotheses of the study**

3. **Is there a strong relationship between considering customers' needs and institutional planning for quality education?**

   Ho: There is no strong relationship between considering customers' needs and institutional planning for quality education.

The relationship between considering customers' needs and planning for quality education was investigated using Spearman's rho correlation coefficient. There is a strong positive correlation between the two variables, rho= .772, n= 170, p< .000, with high levels of considering customers' needs associated with high level of planning for quality education in Ethiopian public universities. The coefficient of determination showed that the two variables share 59.60% (.772 x .772= .5960) of their variance. There is much overlap between the two variables. Therefore, the researcher failed to accept the null hypothesis. The finding of this study showed that there is a strong relationship between considering customers' needs and planning for quality education. See table 4.36 below for the detail.

**Table 4.36 Correlation between customers' needs and planning for QE**

| | | | Custm needs | Planning for QE |
|---|---|---|---|---|
| Spearman's rho | Custm needs | Correlation Coefficient | 1.000 | .772** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Planning for QE | Correlation Coefficient | .772** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

### 4.4.4 A Relationship between Considering Customers' Needs and Performance Improvement

**Hypotheses of the study**

4. **Is there a strong relationship between considering customers' needs and performance improvement?**

   Ho: There is no strong relationship between considering customers' needs and performance improvement.

Table 4.37 below shows a relationship between considering customers' needs and performance improvement taking in to account the Ethiopian public universities context.

**Table 4.37 Correlation between customers' needs and performance improvement**

| | | | Customers' needs | Performance improvement |
|---|---|---|---|---|
| Spearman's rho | Customers' needs | Correlation Coefficient | 1.000 | .570** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Performance improvement | Correlation Coefficient | .570** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between considering customers' needs and performance improvement was investigated using Spearman's rho correlation coefficient. The strength of the relationship between variables are determined as small for rho = .10 to .29, medium for rho = .30 to .49 and large for .50 to 1.00 (Pallant 2007: 147). There was a strong positive correlation between the two variables, rho= .570, n= 170, p< .000, with high levels of considering customers' needs associated with high level of performance improvement in Ethiopian public universities. The coefficient of determination showed that the two variables share 32.49% (.570 x .570= .3249) of their variance. There is much overlap between the two variables. The finding of this study showed that there is a strong relationship between considering customers' needs and performance improvement.

This finding is consistent with previous studies. In the literature, considering customers' needs, have been linked directly to organizations' performance improvement (Sila & Ibrahimpour 2005; Demirbag, Tatoglu, Tekinkus & Zaim 2006; Munizu 2013). The survey of 175 Chinese performances of multinational corporations also provided evidence that customers' involvement was positively related to perceived internationalization of organizations performance improvement (Zhang, Zhong & Makino 2015).

### 4.4.5 A Relationship between Performance Tracking and Implementation of Plans

The reviewed literature shows that performance tracking improves implementations of plans in organizations. With this view in mind, let us see the relationship between performance tracking and implementation of plans in Ethiopian public universities.

**Hypotheses of the study**

5. **Is there a strong relationship between Performance tracking and implementation of plans?**

   Ho: There is no strong relationship between performance tracking and implementation of plans.

Table 4.38 below shows the relationship between performance tracking and implementation of plans taking in to account the Ethiopian public universities context.

**Table 4.38 Correlation between performance tracking and plans implementation**

| | | | Performance tracking | plans implementation |
|---|---|---|---|---|
| Spearman's rho | Performance tracking | Correlation Coefficient | 1.000 | .815** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | plans implementation | Correlation Coefficient | .815** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between performance tracking and implementation of plans was investigated using Spearman's rho correlation coefficient. There was a strong positive correlation between the two variables, rho= .815, n= 170, p< .000, with high levels of performance tracking

associated with high level of implementation of plan in Ethiopian public universities. The coefficient of determination showed that the two variables share 66.42% (.815 x .815= .6642) of their variance. There is much overlap between the two variables. Therefore, the researcher failed to accept the null hypothesis. The finding of this study showed that there is a strong relationship between performance tracking and implementation of plan.

### 4.4.6 A Relationship between Performance Tracking and Performance Improvement

**Hypotheses of the study**

6. **Is there a strong relationship between Performance tracking and performance improvement?**

   Ho: There is no strong relationship between performance tracking and performance improvement.

The relationship between performance tracking and performance improvement was investigated using Spearman's rho correlation coefficient. There was a strong positive correlation between the two variables, rho= .594, n= 170, p< .000, with high levels of performance tracking associated with high level of performance improvement in Ethiopian public universities. The coefficient of determination showed that the two variables share 35.28% (.594 x .594= .3528) of their variance. There is much overlap between the two variables. Therefore, the finding of this study showed that there is strong relationship between performance tracking and performance improvement.

Table 4.39 below shows the relationship between performance tracking and performance improvement taking in to account the Ethiopian public universities context.

| Table 4.39 Correlation between performance tracking and performance improvement | | | | |
|---|---|---|---|---|
| | | | Performance tracking | Performance improvement |
| Spearman's rho | Performance tracking | Correlation Coefficient | 1.000 | .594** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Performance improvement | Correlation Coefficient | .594** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | |

This finding is consistent with and adds to existing studies, which proposed that performance tracking is directly related to performance improvement of organizations (Harris 1995; Cunningham 2007).

### 4.4.7 A Relationship between Quality Management Strategies and the Implementation of Plans

**Hypotheses of the study**

7. **Is there a strong relationship between quality management strategies and the implementation of plans?**

   Ho: There is no strong relationship between quality management strategies and implementation of plans.

Table 4.40 below shows a relationship between teaching methodologies as quality management strategy and implementation of plans taking in to account the Ethiopian public universities context.

**Table 4.40: Correlation between quality management strategies and the implementation of plans**

| | | | Teaching methods as strategy | Implementation of plans |
|---|---|---|---|---|
| Spearman's rho | Teaching methods as strategy | Correlation Coefficient | 1.000 | .419** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Implementation of plans | Correlation Coefficient | .419** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between teaching methodologies as quality management strategy and the implementation of plans was investigated using Spearman's rho correlation coefficient. There was a medium positive correlation between the two variables, rho= .419, n= 170, p< .000. The coefficient of determination showed that the two variables share 17.56% (.419 x .419= .1756) of their variance. There is no much overlap between the two variables. Therefore, the researcher accepts the null hypothesis. The finding of this study showed that there is no strong relationship between teaching methodologies as quality management strategy and implementation of plans in Ethiopian public universities.

### 4.4.8 A Relationship between Quality Management Strategies and Performance Improvement

**Hypotheses of the study**

8. **Is there a strong relationship between quality management strategies and performance improvement?**

   Ho: There is no strong relationship between quality management strategies and performance improvement.

Table 4.41 below shows the relationship between teaching methodologies as quality management strategy and performance improvement using Spearman's rho correlation coefficient. There was strong positive correlation between the two variables, rho= .534, n= 170, p< .000. The coefficient of determination showed that the two variables share 28.51% (.534 x .534= .2851) of their variance. There is much overlap between the two variables. Therefore, the researcher failed to accept the null hypothesis. The finding of this study showed that there is a strong relationship between teaching methodologies as quality management strategy and performance improvement in Ethiopian public universities. See table 4.41 below for the detail.

**Table 4.41: Correlations between quality management strategies and performance improvement**

| | | | Teaching methods as strategy | Performance improvement |
|---|---|---|---|---|
| Spearman's rho | Teaching methods as strategy | Correlation Coefficient | 1.000 | .534** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Performance improvement | Correlation Coefficient | .534** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

### 4.4.9 A Relationship between Taking Actions and Implementation of Plans

## Hypotheses of the study

9. **Is there a strong relationship between taking actions and the implementation of plans?**

   Ho: There is no strong relationship between taking actions and the implementation of plans.

The relationship between taking actions that help to achieve quality education and the implementation of plans was investigated using Spearman's rho correlation coefficient. There was medium positive correlation between the two variables, rho= .466, n= 170, p< .000. The coefficient of determination showed that the two variables share 21.72% (.466 x .466= .2172) of their variance. There is no much overlap between the two variables. Therefore, the researcher accepted the null hypothesis. The finding of this study showed that there is no strong relationship between taking actions that help to achieve quality education and the implementation of plans in Ethiopian public universities.

Table 4.42 below shows the relationship between taking actions and implementation of plans taking in to account the Ethiopian public universities context.

**Table 4.42 Correlations between taking actions and implementation of plans**

| | | | Taking actions | Implementation of plans |
|---|---|---|---|---|
| Spearman's rho | Taking actions | Correlation Coefficient | 1.000 | .466** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Implementation of plans | Correlation Coefficient | .466** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

### 4.4.10 A Relationship between Taking Actions and Performance Improvement

**Hypotheses of the study**

**10. Is there a strong relationship between taking actions and performance improvement?**

Ho: There is no strong relationship between taking actions and performance improvement.

The relationship between taking actions and performance improvement in Ethiopian public universities is shown in table 4.43 below.

**Table 4.43: Correlations between taking actions and performance improvement**

| | | | Taking actions | Performance improvement |
|---|---|---|---|---|
| Spearman's rho | Taking actions | Correlation Coefficient | 1.000 | .608** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 170 | 170 |
| | Performance improvement | Correlation Coefficient | .608** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 170 | 170 |

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between taking actions that help to achieve quality education and performance improvement was investigated using Spearman's rho correlation coefficient. There was a strong positive correlation between the two variables, rho= .608, n= 170, p< .000. The coefficient of determination showed that the two variables share 36.97% (.608 x .608= .3697) of their variance. There is much overlap between the two variables. Therefore, the finding of this study showed that there is a strong relationship between taking actions that help to achieve quality education and performance improvement in Ethiopian public universities.

This finding is consistent with and adds to existing studies, which states that there is **a** positive relationship between taking actions and organizations performance improvement (Harris 1995; Cunningham 2007).

Before presenting summary of major findings in this study, results obtained through open-ended items in the questionnaire and interview responses are presented below.

## 4.5 Qualitative Data Analyses

Following are findings obtained through open-ended items of the questionnaire and interview responses. Themes have been identified from the responses obtained from interviews and open ended items on the questionnaire and presented as follows:

### 4.5.1 Planning Procedures

In most Ethiopian public universities, the educational quality planning process is not participatory. There is no participation of students and instructors in the preparation of educational planning process. Planning activities are made by deans and departmental heads. There are leading plans produced by Ethiopian Ministry of Education (MOE) to help planners in the planning process. In some universities quality assurance directors of schools/colleges also prepare leading plans. There are also guidelines at the school/college levels. Then deans/directors are provided with these leading plans and guidelines to consider in planning quality education. Most universities have five years strategic plan that follows the same calendar with strategic plan of Ethiopia. It is from 2002 Ethiopian Calendar (E.C.) to 2007E.C. After that, yearly plans are made based on this strategic plan. But in most universities, the planners don't take in to consideration ideas and suggestions of their students and instructors. This is because the planners either considers only leading plans that are provided by higher officials or they simply copy and paste plans already prepared in the previous years.

### 4.5.2 Consideration to Prepare Quality Education Plans

In Ethiopian public universities, there are no meetings and discussions that are made about plans together with concerned stakeholders. The planners do not take into consideration weaknesses of past years. Even though there is a guiding plan sent by MOE pointing to issues to be considered while planning, in most universities they duplicate plans already prepared

during past years. Moreover, even if departments plan considering the existing resources such as: instructors, books, classrooms, libraries and laboratories, higher officials do not agree to act in line with plans prepared by the lower management levels. This is because higher officials act only considering the national goals rather than considering actual situations that exist. Therefore, planners at the departmental or college levels do not take into consideration guiding plan sent by MOE. For the higher officials do not act in line with the plans prepared by the lower management levels, planners at the lower level do not consider the existing infrastructure/facilities, the existing number of instructors /especially in technology faculties.

### 4.5.3 Communicating Quality Plans

In most Ethiopian public universities, students and instructors did not give inputs for plans. Plans prepared by deans/directors are not communicated to students and instructors. A senior student reported that *"We have no communication on plans with our dean and no meetings at the department level with students to discuss on plans."* In most universities, there is no communication of the college's/school's plan to the students and the instructors who are members of that college/school. There is a gap in communicating plans to all parties involved. In most cases, the final plans are dispatched to departmental heads by deans or quality assurance directors. But departmental heads do not communicate it to their students and their instructors.

### 4.5.4 Implementing Quality Plans to Guide day to Day Activities

Most respondents reported that there is a gap in evaluating their day to day activities whether they went in line with their original plans or not. There is a gap in using their plans in guiding their day to day activities. A senior instructor of a university reported that *"Plans are there but activities are performed as 'business as usual' in most Ethiopian public universities. Our case*

*is not different from this reality."* The day to day activities of instructors are assumed to be guided by the course outlines they distributed during the first class of a course. But in most cases, they do not act according to their course outlines. There are some plans that are not performed due to shortage of time at the end of semesters. Work is not performed during the beginning of academic years then due to shortage of time some tasks usually are not covered.

### 4.5.5 Checking How Performance Results Match with Original Goals of Plans

In most universities, education managers take feedback from students that are class representatives. They take feedback about performances four times per year on average. In some universities, even the university presidents discuss issues with student union representatives. Quarterly reports are there. Most deans/directors check their performances by collecting data in meetings per month with class representative students. But in most cases departmental heads do not have meetings with students.

Most students report to the deans when instructors prepare examination questions that have contents outside of those indicated on the course outlines. In most universities, monthly reporting of departments for deans/quality assurance officers and academic vice presidents are there. In the third generation universities, objectives of courses are assessed whether they measure knowledge/cognitive, attitude/affective and/or skill/psychomotor domains. Again in the same university generation examination questions must be aligned with objectives of courses. These are checked by quality assurance committee at the department level. In most universities, induction trainings are given to all newly employed instructors.

In third generation universities, sudden supervisions are made by quality assurance committee on performances of instructors in classrooms. They are suddenly supervised whether they are going in line with their course outlines or not. Respondents reported that this sudden

supervision forces instructors to go as per their course outlines to get positive comments from supervisors. Then their weaknesses are communicated to these instructors at the end of a supervised class to improve their performances. This supervision is made friendly and at the induction training classes instructors are convinced to take this activity positively. There is smooth communication between the supervisors/quality assurance committee and the instructors on giving comments after class supervision.

In most third generation universities, quality assurance committees make supervision by entering classes once per month. Quality assurance committee members check the actual performances of instructors, whether they go in line with their course outlines or not. But a senior instructor from the third generation university reported that *"our educational managers are not satisfied by the supervision of quality assurance committees because there is tolerances and hiding of each others' weaknesses. Until this becomes a norm the managers want to have strict supervision."* Most educational managers in the second generation and the third generation universities reflect their agreement on the idea quoted above. However, these activities were not taken place in almost all first generation universities. In most universities, the educational managers follow up performances of instructors' by using class representative students.

### 4.5.6 Strategies Used to Manage Quality Education

Most universities use student centred, continuous assessment, one to five team work and tutorials as major strategies in managing quality education. In almost all universities, on average five to seven assessments/tests must be given for a course. But instructors in most cases did not give feedback for assessment results. They give to the students only collective marks say out of 100%. In most universities term papers and senior essays are used as a link between theory and practices in organizations. Tutorial classes are also arranged for low achiever students. Tutorials are given by instructors and selected active students/students with

the highest grade point average in a department. Instructors' role is great in playing the guiding role in these strategies. But most instructors do not check why students fail and how to enhance students' performances. Instructors do not give immediate feedback that may help students to learn from their mistakes. This is because in most cases the presence of large number of students in a class makes these activities difficult to undertake, in some other cases instructors do not give attention for these activities.

### 4.5.7 Reasons for Selecting Current Strategies to Manage Quality Education

**Why do these universities use their current strategies?**

Education quality management strategies like student centred, continuous assessments, one to five team work and tutorial classes are used in Ethiopian public universities.

Respondents give the following reasons for using their current strategies: These strategies enable students to perform their best possible. For instance, continuous assessment is the best strategy to make students competent. It also broadens the students' chance to pass or to improve their performances. Continuous assessment is used to check students' performances and to correct them on time. Instructors can enhance students' abilities and skills through student centred, continuous assessment approaches and by giving tutorials for low achievers.

If continuous assessment is used, instructors are expected to evaluate performance status of students at the end of every session or major topic of discussion. Therefore, students will be ready for examinations at the end of every session or major topic of discussion to be successful. These strategies are selected because of the intention to engage students in the teaching-learning process from the beginning to the end. These strategies help students to get good knowledge by increasing their efforts to learn. Continuous assessment is also important to make students learn from their mistakes. Students show good and better performance while

continuous assessment is used as compared to one or two time assessments. However, most respondents reported that the weak background of many students challenged them.

Student centred approach also increases students' self- efficacy. As students make discussions using language of instruction, it develops students' language skill. Student centred is also used to make students active learners. Student centred approach is used to lower the gaps among high, medium and low achievers by improving performances of low and medium achievers. Students are ready for classes by reading different books and articles on topics that they are going to discuss with their instructors. Since students are active learners in this approach, it also minimizes the carelessness (passiveness) of students.

Respondents reported that, nowadays, students prefer the student centred approach since they saw that it improves the students' performances. But most instructors do not coach students to accept the positive impacts of the continuous assessment and the student centred approaches on students' academic performances.

In some universities there are testing centres at the faculty level that checks examination questions in line with objectives of courses. Some universities use the term 'alignment' that is not used in most other universities in Ethiopia. It is an alignment made between course objectives and assessment questions. The letter grades (A+, A, A-, B+, B, B-, C+, C, C-, D, Fx and F assigned for a course) are used as the directives given by MOE of Ethiopia for assessment results given for a student at the end of a course. In all Ethiopian public universities, criterion referenced (fixed scale) is used starting from the current (2013) academic year.

A senior instructor of a university said the following on reasons for using their current strategies of education quality management:

*"We select our current strategy because: We all agree that quality education in our country is declining because:*

*1. Instructors only dictate the teaching learning process. Students repeat what has been said by their instructors in classes for examinations. Students were not involved in teaching-leaning process and were not innovative. Students had no chance to incorporate their innovativeness. Besides, no practices were made by students.*

*2. Students were not taught based on the assigned schedule. Six months courses were covered with in two or less months. Only one or two assessments were given. Students did not have chances to learn from their mistakes. For these reasons quality education was declining in our country. To improve this, it is very important to use our current strategies like student centred, continuous assessment, one to five team work and tutorial classes. This tutorial class is designed for low achievers.*

*3. Peer learning is also important to improve quality education. We have 'peer leaning manual'. Since the peer approach is first heard in politics, the academic staffs in Ethiopian public universities resist this approach. But our education managers communicate articles written on the importance of peer leaning to improve quality education. It is first heard in politics because the academics could not play the leading role in our country. To reverse the resistance education managers communicate scientific articles to our academic staff on the importance of peer learning in improving quality education."*

The above discussion indicates that Ethiopian public universities have valid reasons to take student centred, continuous assessments, one to five team work and tutorial classes as their major strategies of education quality management.

**What are the strengths and weaknesses of the current quality management practices in Ethiopian public universities?**

### 4.5.8 Major Strengths in Managing Education Quality

Almost all Ethiopian public universities respondents strongly agree in using continuous assessment, student centred approach and one to five team work as a strategy to manage education quality. There are good attempts to promote staff in most first generation universities. Continuous assessment is used to check and improve the academic performance of students. These strategies are accepted by senior students and they are also effective in some Universities. In most universities, tutorial service is given by both instructors and one to five team leader students. There is a smooth relationship between instructors and students, good communication among students and instructors and/or the management of universities.

In most universities, the education managers reported that much has been done on instructors starting from course outline development, teaching methodologies design for a course and assessment methods. In almost all third generation universities, the education managers reported that instructors are convinced and they accepted the education quality management strategies. Most third generation universities respondents reported that they perform all of their activities in program, they implement continuous assessment mechanism strictly, and they evaluate assessment questions standards by quality assurance committee and/or by testing committee members at the department level. In most public universities of Ethiopia, induction training is given for all newly employed instructors to make them familiar with their

universities' quality management strategies; they also give higher diploma programs (HDP) for senior instructors to make them familiar with their education quality management strategies.

### 4.5.9 Major Weaknesses in Managing Education Quality

In most Ethiopian public universities, there is a gap between plans and performances. There is shortage of necessary educational facilities and demonstrations to practice what students learned in theory. Education managers reported that instructors and students did not clearly understand the purpose of continuous assessment. In most universities, there are no practices made by students. The lack of libraries, up dated books and moot courts in law schools are common problems. Most respondents reported that, continuous assessment is not being implemented as intended. They reported that, it is not workable in line with the existing time. There are tests at the end of every week on every Friday in third generation universities. But in most cases feedback is not provided within the set time, i.e. in five to seven days. There are many instructors who gave feedback only at the end of courses. Shortage of laboratory rooms together with their facilities, up dated books, and poor background knowledge and skill of most students are common problems in almost all public universities in Ethiopia.

A senior instructor of a third generation university reported that:

> *"MOE assigned students with poor background and low university entrance examination grades to our university as compared to other universities especially the senior universities. These students have also low motivation to learn. Shortages of technology instructors and technical assistants, infrastructure, experienced instructors, incentive packages are common problems in our university. Most instructors in third generation universities are first degree holders."*

This idea is almost common for all third generation universities' respondents. In most universities, instructors face challenges to implement the strategies. Due to large class sizes/ large number of students in a class, and delivering variety of courses, they fail to implement as per the strategies.

Respondents reported that relatively most instructors in first generation universities have good commitment but there are problems in implementing continuous assessment. But students and instructors in most other universities lack commitment. Students do not have positive attitude towards the quality management strategies used but they make attempts only not to fail on examinations. In most universities, no attempt is made by education managers to improve the poor performance of instructors. Students do not know the advantage of giving comments for instructors. This is because education managers do not take measures to improve poor performances of instructors as per the comments collected and instructors themselves do not use collected comments to improve their performances. In most universities, the education managers do not want to take internal quality audit because they believe that the activities currently undertaken are better to improve quality education.

In most third generation universities, instructors do not have job satisfaction; there were challenges by instructors when education managers strictly followed up their performances in line with these strategies. In most universities, students are challenging the continuous assessment approach during their first year of joining university. But when they reach second and third years they take it as part of their life and did not challenge the implementation of the continuous assessment approach. Most respondents reported that in most Ethiopian public universities commitment of the education managers, instructors and students is not as expected. Instructors have incentive package problems. Their salary and other payments that they get from their university cannot cover their monthly expenses. As a result they try their best to get additional payments from other sources. This has direct negative impact on quality of education that they are expected to provide.

Instructors want to pursue their masters program without getting experience in bachelors. Most third generation universities do not give training chances for their instructors. Academic vice president of a third generation university reported that *"We resist giving Masters and PhD chances to make our instructors understand the actual situation of their country before going to the higher education levels. Most instructors didn't clearly understand the actual capacity of their country. Our instructors are not ready to learn from their students."* Most respondents reported that, in public universities of Ethiopia, students didn't correctly understand the essence of peer learning. They didn't make their contributions as a team member for a task. They highly depend on the one to five team leaders. Since students didn't learn in that way at their lower grade levels, there are problems in helping each other at university levels. They couldn't properly entertain the diversities among them.

## 4.6 Chapter Summary

A questionnaire and an interview guide were designed to collect data from ten sampled Ethiopian public universities out of thirty. The targeted respondents were the faculty/school/college deans/directors, departmental heads, student union representatives, senior instructors and senior students. Targeting these respondents in universities was done because these respondents have the institutional knowledge in general as well as knowledge on quality management in particular. The inquiry was performed in October and November 2013. The final questionnaire consisted of fifty six (56) questions. In total, two hundred fifty (250) individual respondents representing ten Ethiopian public universities were asked to fill in the questionnaire. But only one hundred seventy (170) valid questionnaires were used for analysis yielding a response rate of 68% of the respondents included in the study.

In this chapter the researcher has discussed background information about respondents and the questionnaire they worked on consisting of identification of quality education, considering customers' needs, planning for quality education, implementation of plans, performance tracking, and teaching methodologies as education quality management strategy, taking actions

and performance improvement in Ethiopian public universities using means, modes, frequencies and percentage distributions, cross tabulations and chi-square tests. Afterwards, the statistical analysis relationship between the independent variables (identification of quality education, considering customers' needs, performance tracking, quality management strategies used and taking actions) and the dependent variables (planning for quality education, implementation of plan and performance improvement) were analysed using Spearman's rho correlation.

Finally, data obtained through open ended items on the questionnaire and interview responses were qualitatively analysed using thematic analytical technique. Based on frequently obtained responses from research participants: planning procedures, consideration to prepare quality plans, communicating quality plans, implementing quality plans to guide day to day activities, checking how performance results match with original goals of plans, strategies used to manage quality education, reasons for selecting current strategies to manage quality education, major strengths as well as weaknesses in managing education quality in Ethiopian public universities were covered.

In the next chapter the researcher will present interpretations of major findings, conclusions and recommendations that help to improve practices of education quality management in Ethiopian public universities.

# Chapter Five

## 5. Interpretations of Research Results, Conclusions and Recommendations

This final chapter of the study deals with interpretations of research results, conclusions and recommendations.

### 5.1 Introduction

The aim of this chapter is to present interpretations of the research results, conclusions and recommendations that help to improve education quality management practices. The researcher will present interpretations of the research results that has presented in chapter 4. Here the meaning of the results according to the researcher's understanding in relation to the research questions that he went out to investigate will be presented. This final chapter will bring the research to its conclusion by stating what it is and what the results tell us as the answer to the main research question. After interpretations of the results, conclusions and recommendations will be provided in this chapter.

### 5.2 Interpretations of Research Results

The main research question of this study is "what are the practices of quality management of education in Ethiopian public universities?" In their education quality management practices, the universities have some strengths and weaknesses. The overall interpretation of this study points towards the education quality management practices of Ethiopian public universities. It deals with eight identified education quality management constructs. These constructs are

identification of quality education, considering customers' needs, planning for quality education, implementation of quality education plans, performance tracking, teaching methodologies as education quality management strategy and taking actions to achieve quality education and performance improvement. Each of them is presented below:

### 5.2.1 Identification of Quality Education

The majority of the entire respondents (45.3%) either agree or strongly agree that their institution makes identification of quality education. Comparing the three groups of universities the majority (63.2%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (35.1%) and second generation (37.5%) universities. This means that third generation universities make identification of quality education that enables them to think about issues to be included in planning for quality education. If institutions have agreed upon identification of quality, they have to plan activities to be accomplished to fulfil the identified needs and requirements of their customers. In this regard, Ethiopian third generation public universities are found to be performing the best as compared to the remaining two generations of public universities. Ethiopian third generation public universities make identification of quality education as the major input in the procedure of planning for quality education.

The Chi-square test for independence indicated that there is a significant association/relationship between generation of universities and their making identification of quality education. This means that the proportion of third generation universities which made identification of quality education is significantly different from the proportion of the remaining two generations of universities which made identification of quality education. The data obtained for this study shows third generation public universities are performing the best in making identification of quality education that can be used in the planning process to fulfil the needs and expectations of stakeholders.

### 5.2.2 Considering Customers' Needs

The minimum mean for the construct considering customers' needs is obtained for the item which reads as "customers are satisfied with quality management implementation." The minimum mode obtained is 2.00 which is the mode obtained for the item "my institution analyzes and prioritizes customers' needs". In Ethiopian public universities customers are not satisfied with quality management implementation. The universities do not analyze and prioritize customers' needs in their planning process for quality education.

Comparing the three groups of universities the majority (64.9%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (35.1%) and second generation (33.9%) universities. This reveals that third generation universities are performing the best in considering their customers' needs in the planning process for quality education. If universities consider their customers' needs in their planning process, they will perform activities that meet or exceed these needs of their customers and this has positive impact on the institutions' education quality management practices.

The Chi-square test for independence indicated that there is a significant relationship between generation of universities and their making consideration of their customers' needs. This means that the proportion of third generation universities which consider their customers' needs is significantly different from the proportion of the remaining two generations of universities which consider their customers' needs. The data obtained for this study shows third generation public universities are performing the best in considering their customers' needs that will help in performing quality management practices that satisfy or delight their customers.

### 5.2.3 Planning for Quality Education

Most Ethiopian public universities do not specify measures for evaluating plans. This is a weakness in education quality management practices. However, comparing the three groups of universities the majority (56.1%) of third generation universities either agree or strongly agree on planning for quality education items as compared to the first generation (28.1%) and second generation (25.0%) universities. This means that third generation public universities are performing the best in planning for quality education that helps to improve their quality management practices. In other words third generation Ethiopian public universities plan for quality education that enables them to perform quality management activities to meet the needs and requirement of their customers. If institutions have agreed upon quality plans, they will perform activities to fulfil the identified needs and requirements of their customers. In this regard, Ethiopian third generation public universities are found to be performing the best as compared to the remaining two generations of public universities. Ethiopian third generation public universities make plan for quality education as the major roadmap in the education quality management practices.

The Chi-square test for independence indicated that there is a significant relationship between generation of universities and their planning for quality education. It means that the proportion of third generation universities which plan for quality education is significantly different from the proportion of the remaining two generations of universities which plan for quality education. The data obtained for this study shows third generation public universities are performing the best in planning for quality education. If used properly, this planning process will help the third generation universities to improve their quality management practice.

### 5.2.4 Implementation of Plans for Quality Education

In Ethiopian public universities, educational process changes are not tested on small scale. Every day activities are not guided to achieve goals and employee satisfaction and empowerment is not achieved due to quality management practices. These are some of the weaknesses of Ethiopian public universities to have good education quality management practices.

Comparing the three groups of universities the majority (53.0%) of third generation universities either agree or strongly agree on implementation of plans for quality education variables as compared to the first generation (22.7%) and second generation (24.2%) universities. This means that third generation universities are performing the best in implementing quality education plans. This reveals that third generation universities implement quality education plans that enable them to achieve good results in education quality management activities. If universities implement plans of quality education prepared considering their customers' needs and requirements, they will have good quality management practices. In this regard, Ethiopian third generation public universities are found to be performing the best as compared to the remaining two generations of public universities. Ethiopian third generation public universities are the top in implementing plans of quality education which is considered as the best practices of education quality management.

The Chi-square test for independence indicated that there is a significant relationship between generation of universities and their implementation of plans for quality education. This Chi-square test result means that the proportion of third generation universities that implement plans for quality education is significantly different from the proportion of the remaining two generations of universities which implement plans for quality education. The data obtained for this study reveals third generation public universities are performing the best in implementing plans for quality education which results in good quality management practices.

### 5.2.5 Performance Tracking

Ethiopian public universities do not have identified best benchmark institutions in the same industry. They do not evaluate quality of educational programs in relation to benchmarks. They do not regularly collect data on satisfaction levels of their customers; senior education managers do not do more than just talking about quality. However, comparing the three groups of universities the majority (57.9%) of third generation universities either agree or strongly agree on performance tracking variables as compared to the first generation (24.6%) and second generation (25.0%) universities. This also reveals that third generation universities are performing the best in performance tracking of their activities to achieve quality education.

Performance tracking or process controlling is one of the major functions of quality management. In this regard, the third generation universities are performing well and they have common mechanisms to make performance tracking. These mechanisms are commonly known by all members of the university. This helps to correct practices that deviate from the already set plans to achieve the quality education goals. This is a good practice of education quality management.

The Chi-square test for independence indicated that there is a significant association/relationship between generation of universities and their performance tracking. This means that the proportion of third generation universities which make performance tracking is significantly different from the proportion of the remaining two generations of universities which make performance tracking. The data obtained for this study reveals third generation public universities are performing the best in making performance tracking of their activities.

### 5.2.6 Teaching Methodologies as Education Quality Management Strategy

The minimum mean for quality management strategy construct is obtained for the item which reads as "my institution uses linking theory to practice as teaching methodology." This means that Ethiopian public universities do not use linking theory to practice as teaching methodology as compared to other teaching methodologies. This may be the major weakness in providing quality education.

The item "my institution uses continuous assessment as a strategy for education quality management" got the mode of 5.00. This is the highest positive response in the given alternatives. The result revealed that all Ethiopian public universities use continuous assessment as a strategy for education quality management. The remaining teaching methodologies asked on the questionnaire such as student centred teaching methodologies and problem based learning also got more than 50% positive responses. In other words these strategies are also used as teaching methodologies in almost all Ethiopian public universities. This is a promising practice in education quality management to achieve provision of quality education.

### 5.2.7 Taking Actions to Achieve Quality Education

The majority of the entire respondents (59.40%) either agree or strongly agree on the items of taking actions to achieve quality education. Comparing the three groups of universities the majority (68.40%) of third generation universities either agree or strongly agree on this issue as compared to the first generation (54.40%) and second generation (55.40%) universities. This shows that all Ethiopian public universities are performing well in taking actions to achieve quality education. This is a good ground in the practices of education quality management.

The Chi-square test for independence indicated that there is no significant relationship between generation of universities and their taking actions. This means that in taking actions to achieve quality education, the proportion of third generation universities is not significantly different from the proportion of the remaining two generations of universities. The data obtained for this study revealed that all generations of Ethiopian public universities are performing well in taking actions to achieve quality education which is an indicator of good quality management practice. However, Ethiopian public universities are not responsible for not meeting or exceeding standards in a timely manner. There are no practices that make universities responsible for not meeting or exceeding standards. For instance according to the Ethiopian ministry of education, instructors who teach in a class should have educational qualification one level more than the class he/she teaches. But in most cases this is not practiced on the ground and for not meeting this standard no university was made responsible. This is another weakness of Ethiopian public universities in education quality management practice.

### 5.2.8 Interpretations of results from Qualitative data

In most Ethiopian public universities, the educational quality planning process is not participatory. There is no participation of students and instructors in the preparation of educational planning process. Planning activities are made by deans and/or departmental heads. Even if departments plan considering the existing resources such as: instructors, books, classrooms, libraries and laboratories, higher officials don't agree to act in line with plans prepared by the lower management levels. In most universities, there is no communication of the faculties/ colleges'/schools' plans for students and instructors who are members of that faculty/ college/school. There is a gap in communicating plans for all parties involved. This may imply that universities perform activities as business as usual. They do not involve students and instructors in the planning process. This means that in Ethiopian public universities there is no consensus among the major stakeholders on destination of where they want to go. They take plans as a burden loaded on them by the higher officials. This is the basic

failure of education quality management practice in Ethiopian public universities at the foundation or planning stage.

Most respondents reported that there is a gap in evaluating their day to day activities whether they go in line with their original plans or not. There is a gap in using their plans in guiding their day to day activities. This means that universities are not strictly performing their everyday activities in line with their plans. This is also another weakness of Ethiopian public universities in education quality management practices.

In the third generation Ethiopian public universities, to force instructors to go as per their course outlines, sudden supervisions are made by quality assurance committee members on performances of instructors in classrooms. In most universities, the educational managers follow up performances of instructors' by using class representative students. This means that education managers in Ethiopian public universities have mechanisms by which they know that their institution provides quality education or not. If instructors take these mechanisms positively, these mechanisms may be good practices of education quality management.

Most universities use student centred, continuous assessment, one to five team work and tutorial classes as major strategies in managing quality education. In almost all Ethiopian public universities, on average five to seven tests (assessments) must be given for a course. This means that common strategies are available for quality management of education in Ethiopian public universities. Availability of these strategies is good in education quality management practices. However, in most cases instructors don't give feedback for assessment results. They tell or show the students only the cumulative marks say out of 100%. It implies that this is another weakness of education quality management practices in Ethiopian public universities. Good education quality management strategies are available but their implementations are weak.

Respondents have the idea that: The current quality management strategies are used because these strategies enable students to perform their best possible in the teaching learning process. Continuous assessment is the best strategy to make students competent. It also broadens the students' chance to pass or to improve their performances. Student centred approach also increases students' self efficacy. It also develops students' language skill because in student centred approach students are active learners. They discuss on lesson topics using the media of instruction, which is English language. They present book reviews and other works in front of their friends in classroom. Continuous assessment is used to check students' performance and to correct them on time. Through continuous assessment instructors are expected to evaluate performance status of students at the end of every session or major topic of discussion. Therefore, students will be ready for examinations at the end of every session or major topic of discussion to pass it. Continuous assessment is also important to make students learn from their mistakes. This means that Ethiopian public universities have valid reasons for using their current education quality management strategies.

Most third generation universities implement continuous assessment mechanism strictly and they evaluate assessment questions' standards by quality assurance committee members and/or testing committee members at the department level. But this is not the case in first generation and second generation universities. This means that third generation public universities are performing well in using continuous assessment mechanism that is used as a strategy of education quality management as compared to the remaining two generations of Ethiopian public universities. They also have good practices of standardizing assessment questions. In this regard the first and second generation public universities have poor practices of education quality management.

Most respondents reported that in most Ethiopian public universities commitment of the education managers, instructors and students is not as expected. Instructors have incentive package problems. Their salary and other payments that they get from their home universities cannot cover their monthly expenses. As a result they try their best to get additional income

from other sources. This means that instructors are not committed for the job in their home universities and they are not devoting most of their time for the teaching learning process. This implies that they are not satisfied with the remuneration that they get from their respective universities. As a result it may result in high instructors' turnover. This has direct negative impact on quality of education that they are expected to provide. This reveals the weak education quality management practices of Ethiopian public universities.

## 5.3 Conclusions

In this section the researcher will provide a reasoned and justifiable ending to his research. No new material will appear here. The researcher draws contents of his conclusions from all the previous chapters. Finally the researcher will put statements on how the research should be critiqued and what issues might form a future research agenda.

The aim of this study is to describe and evaluate practices of education quality management in Ethiopian public universities. The reviewed literature shows that in addition to resource limitations, poor planning procedures for quality education, inadequate implementation of plans, insufficient performance tracking techniques and absence of well documented quality management strategies are the main causes for poor education quality management practices. But the status of these issues was not studied in Ethiopian public universities. Therefore, this research topic was chosen to address the existing gaps in Ethiopian public universities' education quality management practices with regard to planning procedures, implementation of plans, performance tracking, quality management strategies and performance improvement.

This research also sought to find out a relationship between the three dependent variables (planning for quality education, implementation of plan and performance improvement) and the five independent variables (identification of quality education, considering customers'

needs, performance tracking, strategies of education quality management and taking actions) of education quality management.

This research is undertaken following the pragmatic research paradigm that uses the mixed method research approach. Both the quantitative data followed by the qualitative data were presented and analysed.

This study is delimited to undergraduate regular degree programs' quality management of education as viewed by education managers (deans/directors and departmental heads) and selected students in ten randomly selected Ethiopian public universities. In addition, ten senior instructors and ten senior students were interviewed. This delimitation is made because the research would not be manageable if views of all stakeholders in all universities and all programs in these universities were included.

The major findings obtained are the following: several universities have not identified benchmark institutions that help them to manage education quality. In the majority of universities, educational quality planning process is not participatory. There is no participation of students and instructors in the preparation of quality education planning process. In most Ethiopian public universities, there is no communication of the colleges'/schools' plans for students and instructors who are members of that college/school. There is a gap in communicating plans for all parties involved.

Several respondents reported that education managers, students and instructors do not evaluate their activities. There is a gap in evaluating their day to day activities whether they went in line with their original plans or not. There is a gap in using their plans in guiding their day to day activities.

In the majority of Ethiopian public universities customers are not satisfied with the universities' quality management implementation practices. Most institutions do not analyse and prioritise their customers' needs. Most universities do not specify measures for evaluating plans. In most universities educational process changes are not tested on small scale before the wide spread application of changes, every day activities are not guided to achieve goals and employee satisfaction and empowerment is not achieved due to quality management practices used. Several universities do not regularly collect data on satisfaction levels of their customers.

Senior education managers do not do more than just talk about quality and they do not evaluate quality of educational programs in relation to benchmark/s. In several universities workers do not receive immediate feedback on their performances. Most Ethiopian public universities do not use linking theory to practice as teaching methodology. The finding of this study also shows that there is a strong positive relationship between considering customers' needs and performance improvement; performance tracking and performance improvement; teaching methodologies and performance improvement; taking actions that help to achieve quality education and performance improvement in Ethiopian public universities.

## 5.4 Recommendations

These recommendations will help the universities either to improve what some universities have already started or the universities might need to change their ways of performing some activities. Based on the above results and conclusions the following recommendations are suggested to improve education quality management practices of Ethiopian public universities:

Ethiopian public universities should identify benchmark/s that defines the highest level of quality within universities. Both first generation and second generation universities should make identification of quality education. This means that all customers and stakeholders of

Ethiopian universities should have the same definition of quality education. They have to have uniformly agreed up on measures on the criteria that indicate level of quality education. Besides, they have to state in black and white what they mean by quality education and should have written policy statement or manual to attain planned quality education. They should spell out what activities are required to achieve quality education. Furthermore, they should establish team to carry out education quality management activities.

Ethiopian public universities should design quality management implementation practices that satisfy their customers. They should also analyse and prioritise their customers' needs. The first and second generation universities should consider their customers' needs in planning for quality education.

Ethiopian public universities should specify measures for evaluating plans. The first generation and second generation universities should plan for quality education.

Educational process changes should be tested on small scale before making wide spread application of changes. Every day activities of Ethiopian public universities should be guided to achieve quality education goals. Employees' satisfaction and empowerment should be achieved using appropriate quality management practices. Universities should prepare their performance plans based on the needs and requirements of their customers. To do so they should collect and prioritize their customers' needs and requirements. The first generation and second generation universities should implement plans that help them to achieve quality education.

Ethiopian public universities should regularly collect data on satisfaction level of their customers. Senior education managers should do more than just talk about quality education. They should identify benchmark universities and should evaluate quality of educational

programs in relation to their benchmark/s. Both the first generation and second generation universities should follow up (track) their performances.

Workers in Ethiopian public universities should receive immediate feedback on their performances to improve it as per the requirements of customers. The first generation and second generation universities should improve their performances by considering and acting as per the requirements of their customers.

Ethiopian public universities should link theories to practices in organizations. The second generation universities should use the student centred, continuous assessment and one to five team work as education quality management strategies. Universities should be responsible for not meeting quality education/standards already set.

To improve their performances the Ethiopian public universities should consider their customers' needs, track their performances, implement their quality management strategies properly, take actions that help to achieve quality education. Educational quality planning processes should be participatory. There should be participation of students and instructors in the preparation of quality education planning process.

In Ethiopian public universities there should be clear communication between members of the college/school/ faculties about their colleges/schools/faculties plans. Students and instructors should work together with departmental heads and deans/directors about their performance plans.

Ethiopian public universities should evaluate their day to day activities whether they went in line with their original plans or not. Performance plans should guide the day to day activities of the Ethiopian public universities.

Ethiopian public universities should create conducive environment for instructors to help them give their feedback for assessment results on time by reducing class size, by reducing the number of courses instructors teach and by increasing motivation of instructors through different motivation strategies.

The first generation and the second generation universities should perform all of their activities in program. They should implement the continuous assessment mechanism strictly. They should evaluate assessment questions standards in line with course objectives by quality assurance committee members and/or testing committee members at the department level.

In Ethiopian public universities performances should be guided by plans they set. Students should make practices for what they have learnt. The Ethiopian ministry of education and other concerned bodies should fulfil all the required educational materials and facilities for these universities. Continuous assessment should be implemented in all Ethiopian public universities as intended. To do so instructors should not be loaded by variety of courses in a semester. Number of students assigned in a class should be manageable.

The Ethiopian government should design strategies to increase commitment of the education managers, instructors and students. There should be incentive package programs for instructors to increase their commitment. Job opportunities for university graduates should be created in line with their level and field of training. This helps to develop motivation of the learners/students to improve quality of education in Ethiopian public universities.

## 5.5 Recommendations for Future Research

This section summarizes potential research efforts which would further enhance the education quality management research in Ethiopian public universities. The researcher understands that there are some limitations, which must be considered for future research to make findings of this research more comprehensive and conclusive. These are:

- Refine the variables to study the remaining two core activities of a university: research and community services that are not addressed in the current study.
- Conduct further study by including the currently excluded staff (instructors) and students. Include students who are not the members of student union representatives. If other instructors and other students are included they might have different views.
- Study the views of employers of the graduates of Ethiopian public universities to know their degree of satisfaction on quality of the graduates' performance.
- Apply the relationship between the current variables on education quality management practices to other programs like distance and open learning, summer, extension and graduate programs.
- Conduct similar study on private Ethiopian higher education institutions to know their status of education quality management practices. Different findings may be obtained from these institutions as compared to the current findings.

In this chapter the researcher has discussed interpretations of the major findings, conclusions and recommendations that help to improve practices of education quality management in Ethiopian public universities. Moreover, further research areas that are not addressed in the current study have been recommended by the researcher.

In the next pages, the researcher will list all the references used in this study using the Harvard reference style. Finally, the ethics clearance certificate, the permission letter, the questionnaire and the interview guide used as data collection instruments will be attached as appendixes.

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Appendix-I

UNISA college of education

# Research Ethics Clearance Certificate

This is to certify that the application for ethical clearance submitted by

**Haile, BS [490252284]**

for a D Ed study entitled

*Quality management of education in Ethiopian public universities*

has met the ethical requirements as specified by the University of South Africa College of Education Research Ethics Committee. This certificate is valid for two years from the date of issue.

Prof CS le Roux
CEDU REC (Chairperson)
lrouxcs@unisa.ac.za
Reference number: 2013 SEPTEMBER/49025228/CSLR

16 September 2013

ምርምርና ማኅበረሰብ አገልግሎት
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Wisdom at the source of the Blue Nile

Vice President for Research
& Community Services
Bahir Dar University
Bahir Dar – Ethiopia

✉ 79

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ቁጥር 21/13840/395
Ref No
ቀን 05/06/2013
Date

To: University of South Africa
Preller St,
Pretoria 0002
South Africa

**Subject: Permission Letter**

Mr. Biruk Solomon Haile, an academic staff at Bahir Dar University, is a PhD student at UNISA. He is currently doing his PhD work entitled "Quality Management of Education in Ethiopian Public Universities". Up on his acquisition of Ethical Clearance from your esteemed university, we will provide him with permission letter that enables him to enter into his research sites.

With regards,

Tesfaye Shiferaw Bogale (Ph.D)
Vice President for Research &
Community Service

CC:

- Research and Community Services Vice President
- Mr Biruk Solomon
  Bahir Dar University

L/T

"ተልኳችን ማህበረሰቡን ያቀፈ ነው"
መልሱን ሲጽፉልን ኣባክዎ የኣኛን ቁጥር ይጥቀሱ
In Replying, Please quote our ref.No.

## Appendix III

**Questionnaire to be filled by deans/directors, departmental heads and student union representatives on Quality Management of Education in Ethiopian Public Universities**

**University of South Africa**

**College of Education**

**Doctoral program in Education Management**

**Dear faculty/college dean and/or institute /School director, departmental head or student,**

I am a doctoral student interested in investigating quality management of education in your institution. Thus, your thoughtful and honest responses to this questionnaire are very important. You will find on the following pages a number of statements about your institution concerning education quality management practices. Please express your opinion about each statement. Your participation is voluntary and you can withdraw at any time you want if you fill discomfort. To preserve confidentiality, your name is not required. About 20 minutes required to work on this questionnaire.

Thank you in advance for your cooperation and honest responses!

**N.B.: Quality Management** here is interchangeably used with **Quality Assurance**

**Part I: Background information**

**Please provide the following information. Choose one response for each by putting "√" mark in the boxes given; and/or write your responses on the space provided.**

1.Name of your University_____ 2. Your Education level _____

3. Your academic Discipline

Agriculture □ Business and Economics □ Education □

Engineering and Technology□ Health science □ Law □

Natural science□ Social science and humanities □ others (specify) _____

4. Your Gender Male □ Female □

5. How long have you been in your institution?

Less than 2 year □ 2 – 5 years □ 5 – 8years □ 8 – 11 years □

More than 11 years □

6. How long have you been as a dean/director/departmental head/student union representative?
Less than 1 year □ 1 – 3 years □ 3 – 5 years □ More than 5 years □

**Part II Identification of Quality Education**

**Read each statement, then choose and put a "√"mark in alternative boxes which best describe your reaction to the statement.**

**Where: 1= Strongly disagree 2= disagree 3= Undecided 4 = Agree 5= Strongly Agree**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **7** | Meaning of quality education has been stated in writing | | | | | |
| **8** | There is a written policy statement or manual to attain planned quality education | | | | | |
| **9** | Benchmarks have been identified that define the highest level of quality within universities | | | | | |
| **10** | Activities required to achieve quality education has been identified | | | | | |
| **11** | Team has been established to carry out education quality management activities | | | | | |

**Part III Considering customers' needs**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **12** | Understanding needs of customers' education quality plan is set | | | | | |
| **13** | Plans are prepared to meet or exceed needs of customers | | | | | |
| **14** | Plans for educational processes are based on analysis of future customer requirements | | | | | |
| **15** | While planning customers' needs are analysed and prioritised | | | | | |
| **16** | Every possible effort is made to provide education that will best meet customers' needs | | | | | |
| **17** | Customers are satisfied with quality management implementation practices | | | | | |

**Part IV Planning for Quality Education**

**Where: 1= Strongly disagree 2= disagree 3= Undecided 4 = Agree 5= Strongly Agree**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **18** | Data are collected to identify problems and develop plans for improvement | | | | | |
| **19** | Measures have been specified for evaluating the plans | | | | | |
| 20 | Plans for educational processes are based on analysis of data about competing educational institutions | | | | | |
| **21** | There are measures to check whether or not the institution has achieved its stated quality education goals | | | | | |
| **22** | Processes are goal oriented with specific measurable outcomes | | | | | |

**Part V Implementation of Educational Quality Plans**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **23** | Educational process changes are tested on a small scale before making widespread modifications to procedures | | | | | |
| **24** | Data are systematically collected for evaluation to improve education quality | | | | | |
| **25** | Everyday activities are guided to achieve goals of quality education plan set | | | | | |
| **26** | There is quality system that requires all staff and students to be involved in assessing quality levels on regular basis | | | | | |
| **27** | Specific commitments are made to enhance quality of educational programs that it offers | | | | | |
| **28** | Quality management is used as an important management method to achieve improvements in quality of education | | | | | |
| **29** | Quality management implementation has become a social movement | | | | | |
| **30** | Employee satisfaction and empowerment is achieved due to quality management implementation | | | | | |
| **31** | The existing work processes have been rationalised with a standardised procedural system | | | | | |

**Part VI Performance Tracking**

**Where: 1= Strongly disagree 2= disagree 3= Undecided 4 = Agree 5= Strongly Agree**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **32** | There is system for two way communication among service providers, managers and service users | | | | | |
| **33** | Data are regularly collected on satisfaction levels of staff on quality of education | | | | | |
| **34** | Regular feedback is received about how satisfied the students are with education quality they receive | | | | | |
| **35** | Regular feedback is received about how satisfied the employers of graduates are with quality of its graduates | | | | | |
| **36** | Senior education managers do more than just talking about quality education; they are very much involved in action | | | | | |
| **37** | Quality of educational processes are evaluated in relation to its benchmark universities | | | | | |

**Part VII Teaching methodologies as Education Quality Management strategy**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **38** | **Student centred** teaching methodologies are used as a strategy for education quality management | | | | | |
| **39** | **Problem based learning are used** as a strategy for education quality management and delivery | | | | | |
| **40** | **Linking theories to practices** are used as a strategy for education quality management | | | | | |
| **41** | **Continuous assessments are used** as a strategy for education quality management | | | | | |

**Part VIII Taking Actions**

**Where: 1= Strongly disagree 2= disagree 3= Undecided 4 = Agree 5= Strongly Agree**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **42** | Actions are taken on time in efforts to enhance our institutional system | | | | | |
| **43** | There are engagements in developing human resources that are needed to improve education quality | | | | | |
| **44** | Relatively up-to-date required educational facilities are utilized | | | | | |
| **45** | Education quality management strategies are harmonized | | | | | |
| **46** | Education quality management strategies are communicated to all people associated with the process | | | | | |
| **47** | Suggestions collected from stakeholders are applied, if appropriate | | | | | |
| **48** | There is responsibility for meeting or exceeding standards in a timely manner | | | | | |

**Part IX Performance Improvement**

**Due to implementation of the current quality management strategies used**

| No | Items: In my institution | 5 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|---|
| **49** | Workers receive immediate feedback on their performances | | | | | |
| **50** | More number of students are satisfied with the teaching learning process | | | | | |
| **51** | More number of students are able to improve their Cumulative Grade Point Average/CGPA | | | | | |
| **52** | More number of students are able to produce problem solving research outputs | | | | | |
| **53** | More number of competent professional graduates are produced | | | | | |
| **54** | Departments Plan, Do, Study, Act for their performance improvement | | | | | |

**Part X General Questions about Education Quality Management**

**Write your responses on the space provided**

55. What are the major problems of education quality management practices in your institution? _____

_____
_____
_____.

56. What solutions can you suggest to improve the current education quality management practices in your institution?_____

_____

_____
_____.

**Thank you Very much for your participation!**

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# Appendix- IV

## Interview Guide for senior instructors and senior students on Quality Management of Education in Ethiopian Public Universities

## University of South Africa

## College of Education

## Doctoral program in Education Management

**Dear senior instructor or senior student,**

I am a doctoral student interested in organizing your opinion on education quality management in your institution. Thus, your thoughtful and honest responses to these questions are very important. Please express your opinion about each question below. Only group result will be compiled and presented. To preserve confidentiality, your name is not required. About 25 minutes required to respond for this interview.

Thank you in advance for your cooperation!

1. How does the educational quality planning activity performed in your institution?

2. What conditions are taken in to consideration to prepare educational quality plan?

3. How do the educational quality plans communicated to all parties involved in your institution?

4. How do the education quality plan set are implemented to guide the day-to-day activities of your institution?

5. How does your institution check how closely performance results match with the original goals of the plan?

6. What strategies does your institution use to manage education quality?

7. Why does your institution select its current strategy to manage education quality?

8. What do you think are your major strengths in managing education quality?

9. What do you think are your major weaknesses in managing education quality?

10. What comments do you want to give about education quality management in your institution?